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**Diploma Thesis**

**Comparative Analysis of Excise Taxes in Selected EU  
Countries**

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## Declaration

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In Prague, 30.11.2015

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# **Komparativní analýza spotřebních daní ve vybraných zemích EU**

## **Souhrn**

Tato diplomová práce analyzuje spotřební daně na tabákové výrobky v Evropské Unii. Je popsán vliv na změny spotřebních daní z tabákových výrobků na státní rozpočet a na černý trh. Také se text zabývá efektní regulací trhu a neefektivnosti zvyšování spotřebních daní.

**Klíčová slova:** spotřební daně, Evropská unie, nelegální trh, HDP, legislativa

# **Comparative Analysis of Excise Taxes in Selected EU Countries**

## **Summary**

This diploma thesis analyzes the excise tax on tobacco products in the European Union. It describes the impact of changes in excise taxes on tobacco products on the state budget and on the black market. The text also deals with effective market regulation and inefficiency of increasing in excise taxes.

**Keywords:** excise taxes, European Union, illegal trade, VAT, legislative

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# 1. Introduction

Smoking, the consumption tax, state budget, or the public budgets as well as the black market are often discussed topics. According to the Czech Information Agency (2013) about one third of the population smokes in the Czech Republic.<sup>1</sup> With the topic of smoking is concerned not only a wide range of health professionals, but also economists, since tobacco products are subject to heavy taxation and revenue from these taxes is a considerable part of general government revenues.

Taxes are in the Czech Republic, as in other democratic countries with developed market economy, a politically sensitive issue with strong economic overtones. After joining the European Union, excise taxes are continually increasing, which subsequently translates into other areas of the economy.

The market for tobacco products is subject to significant government regulation. These regulations affect not only the market itself, but their effects can be observed in other sectors and areas of the economy and society.

The aim of this thesis is the elaboration of a comprehensive analysis of the market of tobacco products, focusing on the taxation of these products, and the ensuing revenues for public budgets, consumption, and state regulation and their consequences, including the black market of tobacco products.

The work is based on two hypotheses that are related. The first concerns the identification of changes in the structure of consumption of tobacco products, caused by the growth of prices derived from the increase in excise tax on tobacco products. The question is whether raising the excise tax on tobacco products causes changes in consumption patterns. The second hypothesis is about maintaining the amount of budget revenues through excise taxes on tobacco products, despite a decline in sales of cigarettes in legal markets. Thus, if despite this reduction in consumption is to reduce public revenues or not.

The introduction defines the basic concepts with which I further work. The second chapter discusses the theory of tax, related to the topic of my work. More specifically, this chapter deals with excise duties, which have a substantial impact on pricing in the market for tobacco products. It deals with the regulation of excise duty on tobacco products and its

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<sup>1</sup> The proportion of smokers in the adult population oscillates between 28 and 32%.

development over time. It reminds Laffer curve phenomenon, detailing the Peltzman effect relating to changes in excise duties, and the theory of rational addiction. Part of this chapter is devoted to the excise duty on tobacco products in Europe and separate subchapter discusses legislation governing the taxation of tobacco products in the Czech Republic and Europe.

The third chapter describes the market of tobacco products in the Czech Republic and its history. A separate chapter is dedicated to effect of changes tobacco taxation, on revenue of public budgets and further chapters of the thesis deal with regulation of the market in tobacco products and their substitutes, and the black market with these commodities.

The last chapter discusses the specifics of which occur in connection with tobacco products. In conclusion, there are some recommendations to the analyzed "problems" of the tobacco market.



## **2. Methodology**

Literature review will be conducted using methods of synthesis, induction, deduction and extraction. Analytical section will be done using methods of collecting information, its subsequent study, analysis by analysis of individual products subject to excise duty, synthesis applied in the practical part in reconciling data collected in previous part of the thesis and the method of comparison, which is applied when examining the relationship between products with excise tax burden in the Czech Republic and in other member countries.

### **3 Terminology concerning tobacco products**

At the beginning of the diploma thesis an overview of the basic terminology relating to tobacco products is stated.

#### **3.1 Tobacco**

Tobacco is the raw material that all tobacco products contain. Philip Morris International (PMI, tobacco, © 2002-2014) mentions the following three most common types of tobacco:

- Virginia tobacco obtains during drying with heated air golden yellow to deep orange color. Virginia tobacco is dried in heated air dryers. The drying process takes a week. Virginia tobacco has a light, bright aroma and flavor. Leading Virginia tobacco growers are Argentina, Brazil, China, India, Tanzania and the USA.
- Burley tobacco is light to dark brown in color. Burley tobacco is dried in air driers. During the long process of drying, which lasts up to two months, the tobacco loses most of the natural sugar content and gains strong flavor resembling the taste of the cigar. Among the largest growers of burley tobacco are Argentina, Brazil, Italy, Malawi and the United States.
- Oriental tobacco is highly aromatic. It has small leaves, which are harvested one after another, as in the case of tobacco Virginia, and dried in the sun outdoors. The largest oriental tobacco growers are Bulgaria, Greece, Macedonia and Turkey.

#### **3.2 Tobacco products**

Under § 101 of the Act no. 353/2003 Coll., On excise duties, tobacco products are divided into the following three categories:

##### **3.2.1 Cigarettes**

The most common tobacco product, with which we meet every day, are cigarettes. By cigarettes usually are understood tobacco strands that are smoked in the same state, then tobacco strands that are by simple non-industrial handling inserted into cigarette-paper tubes, or also strands of tobacco, which is by simple non-industrial handling wrapped in cigarette paper.

Cigarettes are packed in packages, one pack contains 20 cigarettes and must be labeled by a Tobacco stamp (Act no. 353/2003 Coll., § 101).

Individual types of cigarettes are characteristic by the used tobacco blend. For example, the two most common types of PMI cigarettes are a mixture of tobacco and Virginia. It is then further characterized by a mixture of tobacco used in cigarettes, their brands as follows:

To a mixture of cigarettes are used three main types of tobacco - Virginia, Burley and Oriental. To a mixture of cigarettes are commonly added ingredients, which replace the sugars lost during drying of Burley tobacco and supplying each brand of cigarettes characteristic taste and aroma. Cigarettes of this mixture are the most popular cigarettes in the United States, most of Europe, Latin America, Eastern Europe and many Asian countries. Among the popular brands of cigarettes from these mixtures include Marlboro, L&M and Chesterfield from Philip Morris International (PMI). Virginia cigarettes are made up mainly of Virginia tobacco. Some mixtures of Virginia called premixed Virginia, contain small amounts of Burley tobacco, or oriental tobacco. Virginia cigarettes are popular in most areas of the Commonwealth (Australia, Canada, India, Malaysia, Pakistan, Nigeria, the United Kingdom and South Africa). In China, the largest cigarette market in the world, then these mixtures are the most common type of cigarettes. To a mixture of Virginia are normally added no additives. Among the popular cigarette brands include Virginia Long Beach, Peter Jackson (Australia), Canadian Classics and Number 7 (Canada) from PMI. Among other types of cigarettes include cigarettes made from dark tobacco or tobacco dried in the air, cigarette oriental tobacco and cigarettes, Kretek, which contain cloves and are the most popular type of cigarette in Indonesia. (PMI, tobacco, © 2002-2014)

The process of manufacture of cigarettes proceeds as follows. The first step in the manufacture of the assembly corresponding tobacco mixture (see above) of the various types of tobacco to be used. Dried, and pressed tobacco leaves are first humidified and then separated from one another in the so-called Dampening drum. Subsequently, the leaves are transported, where the blend components are mixed so as to comply with the same taste in each cigarette. Then, the mixture in the cutter is cut into fine fibers. Before the mixture for the manufacture of cigarettes is completed, in order to reduce the moisture passes through the drying cylinder. In the next step are applied to a mixture containing only flavoring substances and natural flavor, and finally the finished chopped tobacco filler is stored in

containers, where it is subsequently conveyed to the production (PMI "scented Tobacco", 2012).

### **3.2.2 Cigars, cigarillos**

Cigars and cigarillos are rolls of tobacco that are smoked in its unaltered state and considering the solute properties and normal consumer expectations, are in its unaltered state intended solely for smoking and including a wrapper of natural tobacco, or shredded tobacco filler and with an outer wrapper of the normal color of a cigar of reconstituted tobacco, covering the product, or the filter but not in the case of tipped cigars, the tip, where the unit weight, not including filter or mouthpiece, is not less than 2,3 g and not more than 10 g, and the circumference over at least one third of the length of at least 34 mm. Cigarillo is made exclusively from tobacco or outer wrapper of tobacco leaf. Cigarillo is a short, narrow cigar. Cigarillos are, like cigarettes, machine-produced and sold in boxes. (Act no. 353/2003 Coll., § 101).

### **3.2.3 Tobacco for smoking**

Under the aforementioned term, , can be imagined tobacco cut or otherwise split, twisted or pressed into blocks which can be smoked without further industrial processing. Then also tobacco waste prepared for sale to the final consumer, which can be smoked or smoking tobacco containing more than 25% weight of the tobacco particles having a cut width of less than 1.5 mm<sup>2</sup>. (Act no. 353/2003 Coll., § 101)

The above definitions serve as a basis for calculating taxes levied on tobacco products, and the basic division with which can be met. For curiosity PMI defines further opportunities for segregation of other tobacco products (except machine-manufactured cigarettes). They are:

- Roll-you-own (RYO) cigarettes are handmade from loose or fine-cut tobacco and cigarette paper. The consumer places the tobacco into a cigarette paper and by hand or using packaging equipment a cigarette is packed. A filter can be used, but

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<sup>2</sup> It is a fine-cut tobacco intended for hand-making cigarettes.

generally these cigarettes are smoked without a filter. The size, shape and taste vary considerably depending on the tobacco and packaging.

- Make-your-own cigarettes (MYO), like RYO, are manufactured from loose tobacco, but are sold with pre-made filter tubes and a device with which the user pushes to tubes of tobacco and himself so cigarettes. The finished product is very similar machine-made cigarette.

### **3.3 Tobacco stamps**

Tobacco stamps are used to label cigarette packages and operate on a similar principle such as duty stamps on bottles of alcohol. De facto declare that the manufacturer / importer has paid excise duty properly. Tobacco stamps that are dedicated to Act no. 353/2003 Coll. the Excise Tax Act and Decree no. 467/2003 Coll. the use of tobacco stamps in the labeling of tobacco products.

According to the Act no. 353/2003 Coll. tobacco products must be manufactured in the Czech Republic or imported to the Czech Republic, marked by a tobacco stamp. Mark tobacco products with these labels is obliged manufacturer, authorized consignee or importer of tobacco products or supplier based outside the tax territory of the Czech Republic.

Decree no. No. 467/2003 Coll. among other things, the model and dimensions of tobacco stamps and the manner of its use. Tobacco stamp has dimensions of 20 x 44 mm. On the obverse is a large-format offset security pattern background made up of two screens, which are symmetrical on both axes tobacco stamps. On both sides are printed in black ink price for the end consumer, the number of pieces in a single package intended for direct consumption and letter of the alphabet characterizing the rate of excise duty. The value of tobacco stamps corresponding to the amount of tax per unit of tobacco packaging and repay the value of the tobacco stamps created their collection. Stick with backing at a specified portion of the package, which is designed to open in a way that was not possible without visible damage tobacco stamps to open the packaging.

### **3.4 Minimum excise tax**

For tobacco products it is possible to meet with the so-called minimum excise tax. It guarantees a minimum income tax on each pack of cigarettes, regardless of their retail selling price. (PMI, tobacco taxation, © 2002-2014)

Minimum excise duty on cigarettes is in accordance with Czech law information to the European Commission's 2250 CZK per 1000 pieces, ie. CZK 2.25 / pc (Act no. 353/2003 Coll., § 104).<sup>3</sup>

### **3.5 Price for the final consumer**

Price for the final consumer according to Law no. 353/2003 Coll. the Excise Tax Act means the price which is determined by a price decision under the law on prices as the price for the final consumer unit packaging intended for direct consumption. This price also includes value added tax.

### **3.6 The weighted average price for cigarettes**

Definition of weighted price average can be found in the Act no. 353/2003 Coll. the Excise Tax Act. This is referred to as a weighted average of prices for the final consumer of cigarettes converted into one piece, which is set annually by the Ministry of Finance of the Czech Republic on the basis of the results of the inventory of tobacco labels for the previous calendar year.

From 1 January 2014, the value weighted average price for cigarettes set at 73,74 CZK. (Customs Administration, © 2009)

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<sup>3</sup> See more regulation excise tax on tobacco products.

## **4 Tax and tax theory**

The notion of tax or taxation can be met almost daily. Whether in the form of income tax, value added tax and excise taxes precisely. Following part provides a brief insight into the fundamentals of tax theory, especially the division of taxes and then the description of the tax system in the Czech Republic. Given that the theme of this work is the excise tax on tobacco products, the chapter also focuses on a specific system of taxation of tobacco products in the Czech Republic.

### **4.1 Definition**

Definitions of taxes find the whole range. For example Hamerníková (2004) states that the tax is mandatory, non-refundable, non-equivalent and non-purpose payments to the government budget, usually regular.

The notion taxes is also related to the term tax policy. It is characterized as a practical use of fiscal instruments, which will affect the economic and social processes in the society. Taxes fall within the category of indirect instruments of economic policy and as a means of reallocating the newly created product. In terms of impact on the economy of these tools are further subdivided into automatic stabilizers and discretionary fiscal measures. An example of an automatic stabilizer as a progressive tax rate. The mechanism of these stabilizers working under the condition of a stable, or at least relatively stable price level. The discretionary fiscal measures are changes in the tax system, which are implemented on the basis of government decisions, and are independent of economic cycles. Their weakness is an information and implementation delays (Broad, 2008).

The obligation to pay the tax is determined by the Constitution of the Czech Republic. Non-recovery of taxes paid means that the taxpayer is not entitled to a refund. It is therefore a unilateral transfer from the taxpayer to the state.

Tax deductions character can be "de jure" - direct and indirect taxes, local taxes and social security contributions and taxes on the interface and the charge is then moved duties and similar charges / taxes (Široký, 2008).

## **4.2 Function of taxes**

As reported by Široký (2008), taxes should play in the economy three main functions, namely:

- Allocation
- (re) distribution
- Stability

Allocative function solves the problem of optimal allocation of government spending between private and public consumption. Through transfer payments and taxes, the government acts on the (re) distribution of pensions. The main idea of the stabilizing function of taxation is that it should contribute to mitigating the cyclical disparities in the economy.

## **4.3 Assessment and collection of taxes**

In the context of examining the excise tax on tobacco products it is necessary to distinguish between assessment and collection of taxes. Customs Administration (© 2009) talks about the assessment / tax legislation to individual selected products. This notice applies to the relevant tax period, which is the period of the obligation to declare and pay tax. In contrast, the collection of excise duty is a tax assessment against the time-shifted up to its maturity.<sup>4</sup>

## **4.4 Excise duty**

Široký (2008)<sup>5</sup> defines excise duty as a tax, whose role in the tax systems of countries is stable revenue to the state budget and the regimentation of consumption goods to which this tax is levied. Mostly these are goods that have negative environmental or health impacts. Excise taxes as they are known today, were first designed for the goods and service that wanted the state to be regulated. These taxes are already included in the price of goods and services, and therefore are referred to sometimes as a tax-neutral in the sense that they do not take into account the pension situation of consumers. They differ from each other by defining the base and place the selection of this tax. Indirect taxes, to which also included the excise tax is further classified. Basic classifications of these taxes are

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<sup>4</sup> In this work in other chapters working with data from the collection of excise tax on tobacco products.

<sup>5</sup> In general agreement with other authors.



indirect taxes on general and selective indirect taxes - the so-called excise taxes. In most cases, the general indirect taxes set percentage of the price as a tax "ad valorem" while selective indirect taxes (duties) as a tax unit. The aforementioned method of selective taxation of indirect taxes, the so-called excise taxes, which are generally determined by the unit of taxation, however, does not apply to taxation of cigarettes. The tax on cigarettes in the Czech Republic is defined as the sum of the fixed tax (unit) and the percentage part ("ad valorem"). Excise taxes impose the state governments primarily on such products that have a long-term and consistent consumption and are characterized by inelastic price elasticity of supply and demand. These conditions in turn guarantee more or less stable and easily predictable tax revenue for public budgets.

Cigarette market is generally referred to as a demonstrative example of the market with a steep (inelastic) demand. The effects of excise duty on this market thus fall primarily on consumers.

These taxes are regressive in nature, as less educated, and people from lower income groups smoke more. (Becker, 1996).

Graphical representation of the consequences of the introduction of excise duty on the market in general and the market for tobacco products is shown in a separate subchapter.

#### **4.4.1 The consequences of the imposition of excise duty**

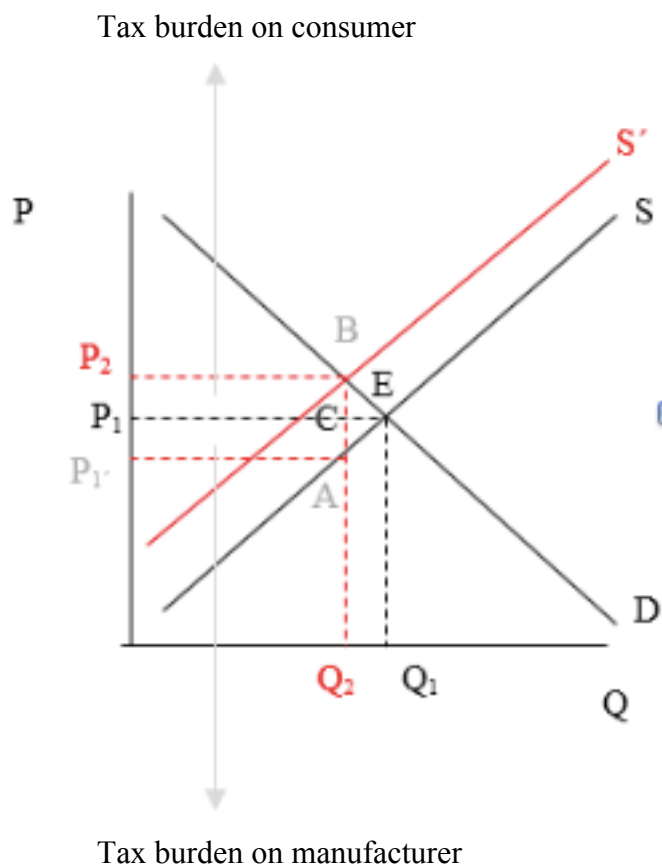
##### In general

The introduction of excise duty carries a wide range of spillover effects. The effect of the excise duty falls on both the manufacturer or dealer and the end consumer. As illustrated by an example Gwartney and Stroup (1997), excise tax, which enters into prices, the decline in supply. The product is more expensive, although the gain does not increase the manufacturer. In addition, there is on the market still deadweight loss. Sometimes it is also called as Harberger triangle and is a measure of the inefficiency of taxes. Decline in supply is illustrated in the graph below.

The curve D illustrates the demand curve and S supply. Initial market equilibrium is at point E in the amount Q1 and price P1. After the imposition of of excise duty the supply curve shifts to the left up to a new level, which shows the S line. Then the new equilibrium is at point B in the amount Q2, and the price P2. As the graph shows, under the new situation on the market of goods sold at a higher price P2 at a lower amount Q2. Burden of

excise duty then falls to the manufacturer ( $P_1' - A - C - P_1$ ) and consumers (rectangle  $P_1 - C - B - P_2$ ). Harberger triangle between points  $A - B - E$ .

**Graph no. 1 The consequences of the imposition of excise duty**



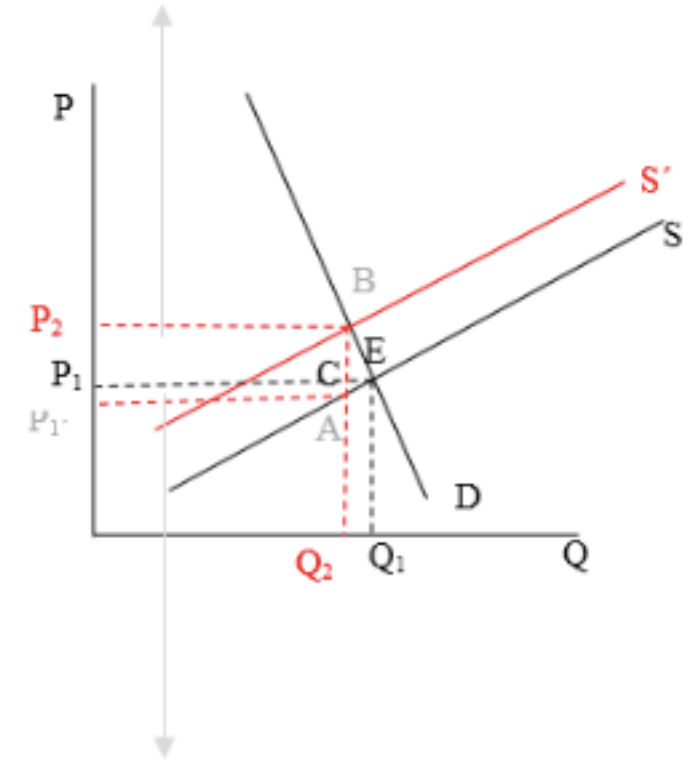
Source: own processing

On the market with inelastic demand

The market for tobacco is not a standard market in the true sense of the word. Given that tobacco products belong to a group of addictive substances, the effect of the introduction of excise duty will not be as noticeable, as is the case with 'normal' goods. Tobacco products are goods with inelastic demand, this means that the increase in prices of tobacco products would have very little or no impact on the change in quantity demanded due to the fact that people are not willing or more able (due to the addictiveness of tobacco products) quantity demanded at raising the price cut. Market with inelastic demand is reflected in the graph below.

## Graph no. 2: Consequences of the imposition of excise duty on the tobacco market

Tax burden on consumer



Tax burden on manufacturer

Source: own processing

From the second graph is showed that the market of tobacco products has certain specifics. The demand curve  $D$  is less elastic, in graphical terms this means that it is more steep than the demand of the previous graph. Inelasticity of demand is due to changing the ratio of the tax burden falling on the consumer (rectangle  $P_1-C-B-P_2$ ) and manufacturer (rectangle  $P_1'-A-C-P_1$ ). After the introduction of excise duty, this ratio changed to the detriment of consumers. Supply curve after the excise burden shifts to the left upwards of initial position  $S$  to a new level  $S'$ . The initial balance, that was at the point  $E$  in quantities  $Q_1$  and  $P_1$  is newly included at point  $B$  when the price  $P_2$  and quantity  $Q_2$ . The rectangle shows the tax burden of consumers is considerably larger than the rectangle that demonstrates the tax burden borne by the manufacturer.

## **4.5 Peltzman effect**

One of the theoretical approaches for which there is a focus, is the Peltzman effect. This phenomenon was observed by an economist Sam Peltzman (1975), originally on the example of the introduction of compulsory seat belts in cars. The positive impact of regulation is partially or completely offset by another - unintended - effect that results motivating people. This mechanism is called "Peltzman effect" and discusses the fact that there is a change in circumstances, this will be reflected on changing people's behavior. Froněk (2007), intended in his article, dealing with Sam Peltzman why regulation in tragic consequences survive. He concluded that the market despite the existence of all kinds of constraints works well and regulators and politicians to subject the impression that the regulation is working as intended. It states that by analyzing Sam Peltzman know that mere "good intentions" are not enough, but you need to understand and comprehend the logic of human action and motivation to know who stands behind these acts.

### **4.5.1 Peltzman effect on the tobacco market**

This subchapter draws attention to the link Peltzman effect on the tobacco market in the Czech Republic in connection with the increase in excise tax on tobacco products and revenue resulting from the imposition of that tax to the state budget.

Raising excise duty, in our case, that the state imposes on tobacco products, in addition to having the intended effects of vpodobě effort to increase revenues to the treasury and unintended consequences.

Consider the following model situation: The government will try to increase income to the state budget by increasing the excise duty levied on tobacco products. Logically, this additional income should be the result of a simple rule of three shows - "if picked at the tax rate of X% volume of funds in the amount of CZK X at Y% rate this selection will be CZK Y". Changing conditions, however, according to Peltzman cause inadvertent changes in consumer behavior, which also with tobacco products on the market can be seen both on the part of producers and consumers.

What the producers are concerned, Peltzman effect can be demonstrated using data from the Customs Administration of the Czech Republic (© 2009), which states that the original estimates of charging excise duty from the actual collection of sometimes very different. It was due to the continuous increase in the excise tax on tobacco products.

If we look, for example, in 2005, so this year, according to data of the Customs Administration of the Czech Republic (© 2009) on the excise duty on tobacco products chosen 1.3 billion CZK more than the initial estimate from the state budget, which represented change of + 5.4% compared to the original assumption. In July 2005, it had entered into force an amendment to the law on excise taxes due to an increase in tax rates for cigarettes. That will increase the excise duty has been known in advance, and for this reason in the first half of 2005, cigarette manufacturers to stockpile tobacco stamps, which are referred pack of cigarettes. This frontloading is just an example of the unintended consequences of increasing excise duties. Manufacturers have adapted to changing rates of excise duty their behavior.

The same example can be seen in 2006, when the effect of frontloading (see below), was very significant. According to information from Customs Administration of the Czech Republic (© 2009) increased choice of excise duty on tobacco products by 6.8 billion CZK, which represented 26.8% of the whole. This was the response of manufacturers of tobacco products to approximately one-fifth increase in excise duty. In this year manufacturers have removed a significantly higher amount of tobacco stamps, which accounted for 88% of the total volume of consumption of tobacco stamps of the previous year.

This trend can be seen in multiple periods and confirms the hypothesis that increasing the excise tax is in addition to the intended consequences as well as those with which regulators initially counted on.

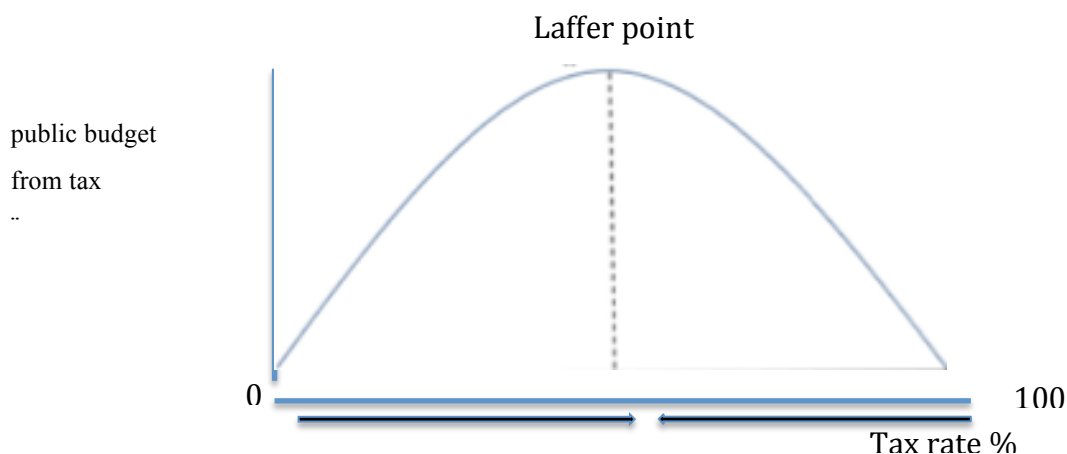
On the consumer side, we see the Peltzman effect, which are reflected in changing consumer behavior. As a result of re-raising excise tax, consumers began to gradually move to cheaper cigarettes in the price segment and for smoking tobacco cut. This is confirmed in its annual reports and Czech Customs Administration.

#### **4.6 Laffer Curve**

Laffer curve is named after the economist Arthur Laffer, in the tax theory is frequently mentioned concept. It is a curve that illustrates the relationship between the tax rate and the income from these taxes flowing into the state budget. The basic idea of the relationship of tax rates and tax revenues, which Laffer (2004) defined, is that changes in tax rates has two opposite effects: the arithmetic effect and economic effect.

On the graph no. 3 shows the progress of Laffer curve. The vertical axis represents the tax revenue to the state treasury and the horizontal axis reflects the tax rate as a percentage.

**Graph no. 3: The Laffer curve**



From the course of Laffer curve shows that increasing the tax rate, state revenues grow at first and after crossing a certain limit then they decrease. If the tax rate will reach the imaginary "turning point", which is also called Laffer point, any further increase in the tax rate will lead to a reduction in the overall tax revenue. State income from tax is at the Laffer point at maximum. Higher tax rates are then already inefficient, because despite the continuous increase in the tax rate leads to reduce public revenues, arising from such taxes.

#### **4.7 Theory of rational addiction**

Theory of rational addiction is a theoretical approach, whose authorship is attributed economists Gary Becker and Kevin Murphy (Becker and Murphy, 1988). Suggested solutions, inter alia, whether the addiction is compatible with rational behavior. Becker (1997) states that a rational consumer maximizes his utility under stable preferences and tries to predict the future consequences of their actions. In this sense it is the habit of some sort of the antithesis of rational behavior.

Becker and Murphy (1988), but also says that "... the habits, even the most powerful, are generally rational in the sense that they include consideration of the future while maximizing stable preferences." This means that deny that addiction is incompatible with

rational behavior. The research results showed that the consumption of addictive goods responds less to temporary changes in prices than to changes permanent. One gains a potential addiction to a farm, where increasing its current consumption increases at the same time its future consumption. This habit can be strengthened, which means that the larger the farm normal consumption increases also its future consumption. The farm can be addictive for a particular person, but the other had not, because habits concerning the interaction between people and goods. To be "rational" in this sense means maximizing When individuals consistently over time benefit. Potentially addictive then such a farm, where an increase in the consumption of past increases current consumption.

Based on their investigation, these economists found that "ceteris paribus gaining individuals greatly discounted future addiction more likely," (Becker, 1997, p. 100). In his research focused on a change in prices of addictive goods and their impact on consumption. They found that the constant changes in the prices of goods that are addictive; they may or may not have a major short-term impact on the consumption of these goods.

The American Economic Review article, published in 1994, Becker devotes analysis habit of smoking cigarettes. His research has shown that smoking is truly addictions.<sup>6</sup> Rational addiction model takes into account the interactions between zero and normal consumption among consumers maximizing their utility. It states that "the main feature of these models lies in the fact that past consumption of certain goods affects both current and future consumption. Higher past consumption of harmful addictive goods such as cigarettes, stimulating general consumption increasing marginal utility of current consumption to a greater extent than the present value limit damage from future consumption. Past and consumption of addictive goods by strengthening current consumption "(Becker, 1997, p. 119).

Becker, Grossman and Murphy (1994), then tested the model of rational addiction on an analysis of responses cigarette consumption to change their prices. They examined whether lower past and future price of cigarettes increases their normal consumption. They concluded "ten percent permanent increase in the price of cigarettes reduces current consumption by 4% in the short term and 7.5% in the long term. In contrast, the ten

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<sup>6</sup> Using data on annual sales of cigarettes per capita (packaged) in individual states of the United States for the period 1955-1985.

percent increase in the price only for one period reduces power consumption by only 3 percent. "(Becker, 1997, p. 120). They found, therefore, that long-term price elasticity is almost 2 and higher than short-term price elasticity. As a result, it means that the long-term increase in tax revenue will be considerably lower than short-term increase.<sup>7</sup>

In connection with the exploration addictiveness of cigarettes and its impact is also engaged in monopolistic arrangement cigarette market. These investigations have shown that the structure of the market also has an impact on prices and consumption of cigarettes. Observations showed that for example in 1964, when the federal government and the governments of the European Union issued a "Report on Smoking and Health," which contributed to raising public awareness about the harmful consequences of smoking, limiting the advertising cigarette manufacturers and led to the creation of smoking areas in public places workplaces, increased prices for cigarettes. The above measures resulted monopoly producer to raise prices of cigarettes, as the expected decline in future demand for cigarettes just as a result of the above measures. The expected drop in demand reduced their contribution to maintaining lower prices in order to stimulate future demand for cigarettes. The above effect would confirm the paradox that, despite the fact that smokers are decreasing, cigarette products still generate the same high incomes. This investigation confirmed its example, Adler and Freedman (1990).

#### **4.8 Tax system in the Czech Republic**

According to Široký (2008), the tax system in the Czech Republic is divided into two basic categories, namely on direct taxes and also income and indirect. Direct taxes are payable on the income or assets of the taxpayer. They are direct and take into account the assets and income situation of the taxpayer. Indirect taxes we pay, especially in the prices of goods and services and leases and transfers. These taxes are assessed at the same rate for those with high and low incomes. Indirect taxes are subdivided into general, which are imposed on groups of products and services and the so-called excise taxes - the unit taxes on selected commodities.

##### Direct taxation:

- Income tax

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<sup>7</sup> This demonstrated on the example of the price increase in 1993 in the USA, where the price increase in 1993 due to increases in excise duty would reduce consumption in 1993, which subsequently led to a decline in consumption in 1994 and in all subsequent years.



- Income tax
- Income tax from legal persons
- Property tax
  - Property tax
  - Inheritance tax
  - Gift tax
  - Property transfer tax
  - Road tax

Indirect taxes:

- General
- Value added tax (VAT)
- Selective taxes (duties)
  - Excise duty
    - Mineral oils
    - Spirit
    - Beer
    - Wine
    - Tobacco products
- Environmental tax

#### **4.8.1 Excise duty on tobacco products in the Czech Republic**

Excise duties are devoted to Act no. 353/2003 Coll. the Excise Tax Act. Section § 10 of the Act stipulates that the rates and calculation of excise duty. The tax is calculated by multiplying the tax base and the tax rate fixed for the selected product.

Chapter V. The above-mentioned Act is devoted directly to tobacco products. Tax applies to the following tobacco products - cigarettes, cigars, cigarillos and smoking tobacco.<sup>8</sup> The

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<sup>8</sup> A more detailed description, see Section 1.2 "Tobacco products".

basis for calculating the excise duty on the percentage of taxes on cigarettes, the price for the end consumer.<sup>9</sup>

§ 104 of the aforementioned Law on Excise Duties then deals with the rates and calculation of excise duty on tobacco products. Tobacco products for the calculation of excise duties can be divided into the following two "circles":

Cigars, cigarillos and tobacco kouřeníVýše tax on cigars, cigarillos and smoking tobacco, according to the Law on Excise Tax is calculated by multiplying the tax base and the fixed tax rate. To calculate the tax on tobacco smoking is crucial, then his weight at the time the obligation to declare and pay tax.

### Cigarettes

The amount of tax on cigarettes by using a fixed part and a percentage of the tax rate, according to the Law on Excise Duties was calculated by summing the following items:

- the product of the percentage of the tax rate and the end consumer price of these cigarettes divided by one hundred and
- the product of the fixed part of the tax rate and the number of pieces

When using the minimum tax rate is the tax amount calculated by multiplying the minimum tax rate and the number of pieces.<sup>10</sup>

Looking closer, there is a difference between the excise tax on cigarettes each segment. While cheaper brands of cigarettes are subject to a minimum excise tax on expensive brand is exercised greater tax burden - in terms of the sum of the minimum tax rate and the so-called tax "ad valorem", ie the total amount. This means that the minimum excise duty will still accrue a percentage of the total selling price of a packet of cigarettes. Below is demonstrated by calculating the excise tax cost for three different packages of cigarettes. As a model was chosen the year 2013. In that year, the minimum excise duty at CZK 2.18/pc cigarettes, the percentage of tax was 28% and the solid then was CZK 1.16/piece.

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<sup>9</sup> For example - according to the website of Customs Administration, the value of weighted price average for 2014 - 73.74 CZK.

<sup>10</sup> Act no. 353/2003 Coll., § 104 further provides that if the amount of taxes on cigarettes, calculated using a fixed percentage of the tax rate is lower than the amount of tax calculated at the minimum rate of tax applies to the amount of tax calculated at the minimum tax rate.

In the calculations, the standard pack of cigarettes by 20 pieces in one package.<sup>11</sup> Value added tax (VAT) amounted to 21% this year.<sup>12</sup>

#### Option A - 65 CZK

When considering a packet of cigarettes standing 65 CZK, the calculation and the amount of excise duty following:

- the product of the percentage of taxes - 28% of the 65 CZK... 18.20 CZK
- the product of a fixed portion of the tax - CZK 1.16 x 20 pieces ... 23.20 CZK
- excise tax in total - 18,20 CZK + 23.20 CZK ... 41.40 CZK

The amount of excise duty, which we published above, compared with the minimum amount of excise duty. It was in 2013 CZK 43.60 (CZK 2.18 \* 20 pieces). Because our calculation shows that the sum of the two parts of excise duty is lower than the minimum, we must continue in our calculation based on a minimum amount of excise duty, ie. 43.60 CZK.

- Value Added Tax (VAT) -  $(65 \text{ CZK} / 121) \times 21$  ... 11.30 CZK
- The amount of tax altogether - CZK 43.60 + 11.30 ... CZK 54.90 CZK

Based on the above calculations it can be concluded that out of the package with a price tag of CZK 65 goes to the state budget CZK 54.90.

#### Option B - 80 CZK

When considering a package of cigarettes costing 80 CZK, the calculation and above excise tax as follows:

- the product of the percentage of taxes - 28% of 80 ... CZK 22.40 CZK
- the product of Fixed portion of the tax - CZK 1.16 x 20 pieces ... 23.20 CZK
- excise duty in total - 22, 40 + 23 CZK 20 CZK ... 45.60 CZK
- Value Added Tax (VAT) -  $(80 \text{ CZK} / 121) \times 21$  ... 13.90 CZK
- The amount of tax altogether - CZK 45.60 + 13.90 CZK... 59.50 CZK

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<sup>11</sup> Výsledky jsou zaokrouhleny na dvě desetinná místa.

<sup>12</sup> Je počítána pomocí koeficientu pro DPH dle Zákona č. 235/2004 Sb. §37, odst. 2.

In this case, the sum of excise duty was higher than it was at the level of 43.60 CZK, so the calculation of the additional tax was calculated with the amount of CZK 45.60. For a pack of cigarettes costing 80 CZK income goes to the state budget in the amount of CZK 59.50.

### Option C - 100 CZK

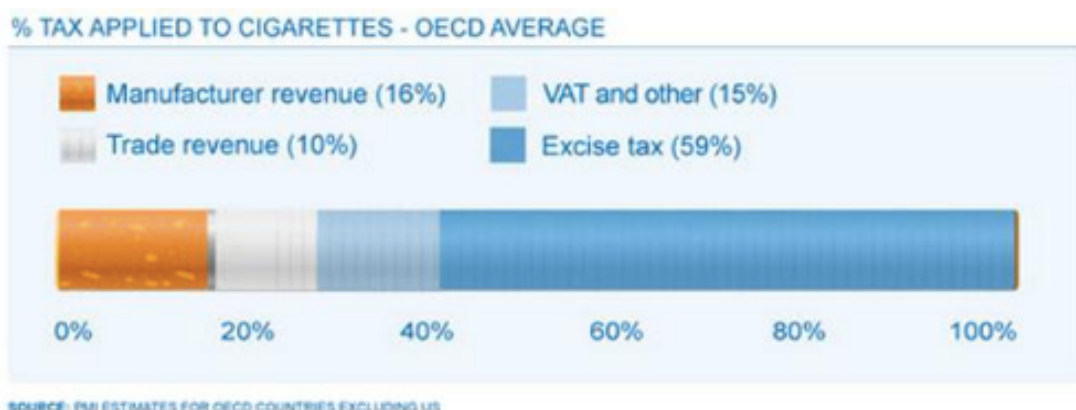
When considering a package of cigarettes costing 100 CZK, the calculation and the amount of excise duty as follows:

- the product of the percentage of taxes - 28% of the 100 CZK... 28.00 CZK
- the product of Fixed part of the tax - 1, 16 x 20 pcs CZK ...23.20 CZK
- excise duty in total - 28,00 CZK + 23 ... 20 CZK 51.20 CZK
- Value Added Tax (VAT) -  $(100 \text{ CZK} / 121) + 21 \dots 17.40 \text{ CZK}$
- The amount of tax altogether - + 51.20 CZK 17.40 CZK ...68.60 CZK

Minimum excise tax on the level of CZK 43.60 (CZK 2.18 x20 pc). This amount is compared with the total amount of excise tax - in this case the sum is again higher than the minimum excise duty. For a pack of cigarettes standing CZK 100 state tax levy by the above calculation CZK 68.60.

Below is included to illustrate the image that shows on the basis of the OECD average percentage of taxes that are levied on tobacco products, in this case cigarettes.

Fig. 1: Taxes levied on cigarettes – OECD average



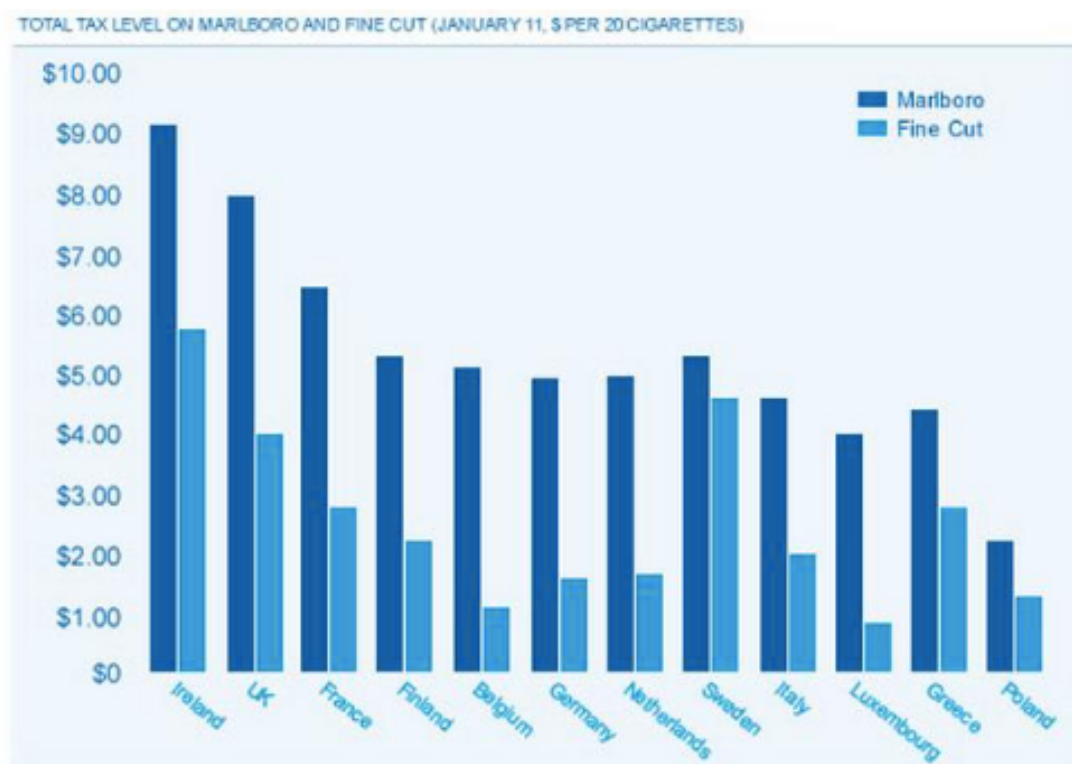
Source: Philip Morris International

Of the OECD average shows that the income of the producer is equal to 16% of the price of cigarettes, reception dealer had then only 10%. On Value Added Tax (VAT) and other taxes accounted then 15% of that price and rapidly forms the largest part of excise duty,

which is at 59%. Taking as an example a pack of regular cigarettes - Option B - with a price of 80 CZK / 1 pack, excise duty is calculated in the amount of CZK 45.60. This represents 57% of the total price of the packages, or approximately 2% below the OECD average.

The following graph illustrates the difference in the collection of taxes on cigarettes Marlboro and cut tobacco intended for smoking, from which the consumer can roll a cigarette own. This difference is very significant, as the chart below clearly shows. In some countries, such as Sweden, the taxes on cigarettes and tobacco to nearly the same; Cigarettes are compared with the cut tobacco taxed slightly higher rate. Conversely, in most countries, the difference between the taxation of cigarettes and cut tobacco is not severe. The difference in taxation has had a number of side effects that are mentioned below.

Graph no. 4: Marlboro cigarettes vs cut tobacco taxation



Source: Philip Morris International

### **The amount of excise tax on tobacco products in time**

The following table summarizes the developments of tax rates on tobacco products in the Czech Republic between 2005 to 2014.

Table no. 1: Development tax rates for tobacco products in the Czech Republic between the years 2005 to 2014

	Percentage	Fixed	Minimum	Percentage	Fixed	Minimum	Percentage	Fixed	Minimum	Percentage	Fixed	Minimum
Cigarettes CZK/pc		0.60			0.73			0.88			1.03	
Cigars, Cigarillos CZK/pc	24%	0.79	Total (at least 1.13 CZK/pc)	25%	0.79	Total (at least 1.36 CZK/pc)	27%	0.90	Total (at least 1.64 CZK/pc)	28%	1.15	Total (at least 1.64 CZK/pc)
Smoking Tobacco CZK/kg		720			810			905			1.20	
Other Tobacco CZK/kg		720			810			905			1.20	
	05/2011-12/2011			2012			2013			2014		
	Tax Rate			Tax Rate			Tax Rate			Tax Rate		
	Percentage	Fixed	Minimum	Percentage	Fixed	Minimum	Percentage	Fixed	Minimum	Percentage	Fixed	Minimum
Cigarettes CZK/pc		1.07			1.12			1.16			1.19	
Cigars, Cigarillos CZK/pc	28%	1.15	Total, at least 2.01 CZK/pc	28%	1.25	Total, at least 2.10 CZK/pc	28%	1.30	Total, at least 2.18 CZK/pc	27%	1.34	Total, at least 2.25 CZK/pc
Smoking Tobacco CZK/kg		1340			1400			1635			1800	
Other Tobacco CZK/kg		1340			1400			1635			1800	

Source: Sagit - rate and calculation of taxes on tobacco products; my customization

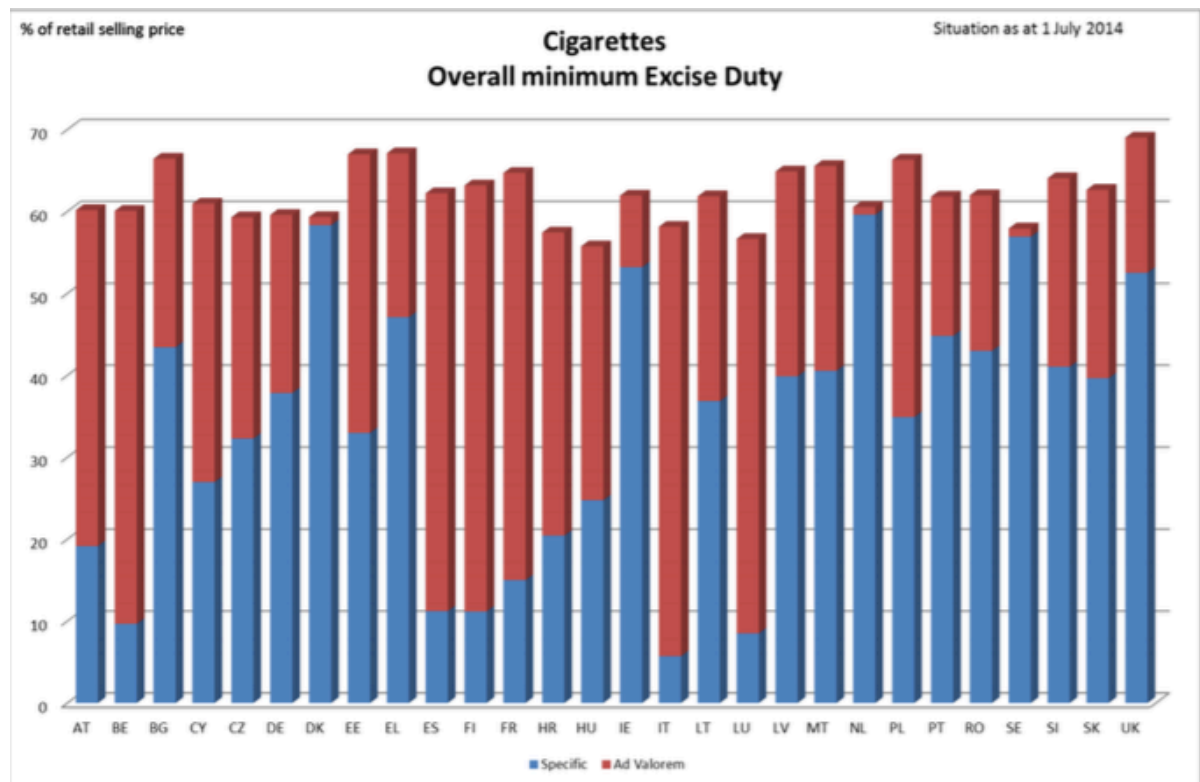
The percentage of excise taxes had until 2008 increasing character. Between 2008 and 2013, the percentage part held constant at 28% and since this year has decreased by one percentage point to 27%. The initial growing trend of percentage can be attributed to the gradual harmonization of excise duty rates of the Czech Republic with the European Union and the intention to increase government revenue through taxation of tobacco.

Regarding the fixed part of the tax, increasing trend shows throughout the study, with the exception of two years, when rates stabilized at a constant level. In the case of a fixed tax rate on cigarettes for the years 2010 and 2011, for cigars and cigarillos of 2005-2006 and 2008-2011. For smoking tobacco were the years 2010-2011, as well as also other tobacco.

#### 4.8.2 Excise duty on tobacco products in Europe

To illustrate the figure below, which shows the composition of the excise duty levied on cigarettes in selected countries of the European Union on 1 June 2014, namely the amount of specific taxes and taxes "ad valorem". It is possible to observe significant differences - for example in Sweden, Denmark and the Netherlands is a specific part of the tax is very high and tax "ad valorem" form only a very small part of the overall excise duty. Conversely, most other states, most notably in countries like Spain, Italy, France, Finland and Luxembourg, the opposite is true and tax "ad valorem" form the largest part of the composition of the excise duty on cigarettes. This ratio is in the taxation of tobacco products is also an important and affects the impact on cigarette market, respectively. tobacco products.

Graph no. 5: Composition of the excise tax on cigarettes in selected countries of the European Union



Source: Eurpen commission (1. 6. 2014)

## 4.9 Legislation regulating taxation

In the Czech Republic, several laws and regulations regulate the issue of taxation of tobacco products. Below are the most important ones.

### 4.9.1 Legislation in the Czech Republic

#### Act no. 353/2003 Coll., on excise duties

Fundamental law regarding tobacco products and taxes, which in 2003 replaced the Act no. 587/1992 Coll. Excise Duty Act governs excise duty on mineral oils on spirits, beer, wine and intermediate products, and the tax on tobacco products.

Among other laws that deal with tobacco products, it is certainly necessary to mention the decree no. 467/2003 Coll. the use of tobacco stamps in the labeling of tobacco products. This decree regulates in detail the issue of labeling of tobacco products. Marking is carried

out so-called tobacco stamps.<sup>13</sup> On tobacco stamps is also called "price for the final consumer," which he also Decree no. 430/2003 Coll., Which regulates the manner of determining the price for the final consumer of tobacco products. Decree no. 275/2005 Coll. then determines the exact procedure for the preparation of proposals for the final consumer prices for cigarettes.

The purpose of the Act no. 110/1997 Coll., On food and tobacco products are set out the obligations of entrepreneurs in the food and tobacco products and their marketing and to adjust state supervision over compliance with obligations under this Act. Act no. 379/2005 Coll., Focuses on measures for protection from harm caused by tobacco products, alcohol and other addictive substances in general. Finally, the Act no. 132/2003 Coll., Which focuses on the regulation of advertising of tobacco products.<sup>14</sup>

#### **4.9.2 Legislation in the European Union**

Before detail on specific EU directive concerning excise duty on tobacco products in the Czech Republic, it is necessary to explain the concept of harmonization. In this case, the process that took place in the Czech Republic in connection with our accession to the European Union.

#### **4.9.3 The process of harmonization of excise taxes with EU**

Nerudová (2011) defines tax harmonization as a process of convergence between the tax systems of countries on the basis of common rules. Kubátová (1998) then identifies three basic stages of tax harmonization:

- harmonization of tax collection;
- harmonization of the tax base;
- harmonization of tax rates.

Harmonization divides Nerudová (2011) further on vertical and horizontal. Vertical harmonization means harmonization of tax systems at various levels of state governments (for example in the USA - harmonization of national and federal tax system). Horizontal is

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<sup>13</sup> More on tobacco stamps in Chapter 1.3

<sup>14</sup> Regulation of tobacco products are addressed in detail for example studies Sevcik, M. et al. : "The impacts of the ban on advertising tobacco products in the Czech Republic". Liberal Institute. Prague, 2000. ISBN 80-86389-00-6.



tax harmonization is imposed the same degree of autonomy, thus harmonizing national tax systems. European Union therefore concerns the harmonization of vertical. The aim of this harmonization is to eliminate differences between national tax provisions.

Tax harmonization has already been enshrined in the Treaty on European Communities Act 1957. The harmonization of excise taxes has been paid much attention, as these taxes directly affect the single market. Complete system of excise duties in the EU was introduced on 1 January 1993. The initial idea was not only to harmonize tax rates, but also the structure of excise duty. However, this idea was later abandoned and harmonization was structurally - for the rates of excise duty were set to their minimum values. There were several reasons, but mainly big differences between the systems of selective taxation and also the existence of the so-called spontaneous harmonizing effect.<sup>15</sup>

According to the Customs Administration of the Czech Republic currently provides for the administration of excise duty on tobacco products in particular, the following six provisions:

- Council Directive no. 200/118 / EC on general excise duty and repealing Directive 92/12 / EEC (effective from 1.4.2010);
- Council Directive no. 92/12 / EEC on the general arrangements for the holding, movement and monitoring of products subject to excise duty, as amended; Council Directive no. 95/59 / EC on taxes other than turnover taxes which affect the consumption of tobacco products, as amended;
- Council Directive no. 92/80 / EEC on the approximation of taxes on manufactured tobacco other than cigarettes, as amended;
- Commission Regulation (EC) no. 684/2009 implementing Council Directive no. 2008/118 / EC as regards the computerized procedures for the movement of excise goods under a duty suspension (effective from 1.4.2010);
- Council Regulation (EC) no. 918/83 Community system of reliefs from customs duty, as amended.

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<sup>15</sup> Spontaneous harmonizing effect means that if the rate of excise very different, then the very existence of different tariffs leads to spontaneous harmonization. Consumers will logically to purchase products on the market, where rates are lower. In the long run it will be for this reason, the tendency to approximate the rates of excise duties (duties).

From the Official Journal of the European Union on 5 July 2011, shows that three of the abovementioned Directives Customs Administration of the Republic were codified in Directive 2011/64 / EU of 21 June 2011 on the structure and rates of excise duty on tobacco products, which came into force on 1 January 2011. This Directive lays down general principles of harmonization, the structure and rates of excise duty by the European Union (EU) levied on tobacco products. The following subchapter contains selected information from the above mentioned directive, which are important to the overall understanding of setting taxation of tobacco products in the Czech Republic.

#### **4.9.3.1 Directive 2011/64 / EU<sup>16</sup>**

For the purposes of this Directive are considered as tobacco products:

- cigarettes;
- cigars and cigarillos;
- smoking tobacco, including fine-cut tobacco for hand-rolling tobacco and other smoking tobacco.

##### Provisions applicable to Cigarettes

Cigarettes manufactured in the Union and imported from third countries are subject to an ad valorem excise duty calculated on the maximum retail-selling price, including customs duties, and also to a specific excise duty calculated per unit of the product. However, Member States may, on the basis of assessment of the ad valorem excise duty on cigarettes exclude customs duties. The rate of the ad valorem excise duty and the amount of the specific excise duty must be the same for all cigarettes. The percentage of the specific component of excise duty to the total tax burden on cigarettes shall be determined using the weighted average retail-selling price. The weighted average retail selling price is calculated by dividing the total value of all cigarettes released for consumption, based on retail selling price including all taxes, divided by the total quantity of cigarettes released for consumption. It shall be determined by 1 March each year on the basis of data relating to all such releases for consumption made in the preceding calendar year.

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<sup>16</sup> Europa. Summaries of EU legislation. Taxes. Directive 2011/64 / EU. Available online here: [http://europa.eu/legislation\\_summaries/taxation/fi0009\\_cs.htm](http://europa.eu/legislation_summaries/taxation/fi0009_cs.htm) (14/08/2014)

The specific component of excise tax amounts to less than 5% and not more than 76.5% of the total tax burden, which consists of the sum of the specific excise duty, ad valorem excise duty and value added tax (VAT) levied on the weighted average retail selling price. From 1.ledna2014 specific component must be between 7.5% and 76.5%. If a Member State due to the change in the weighted average retail selling price of cigarettes occurs specific component of excise duty, expressed as a percentage of the total tax burden, below 5, or 7.5%, whichever is applicable, or above the 76.5% of the total tax burden, not the Member state shall refrain from adjusting the amount of the specific excise duty until 1 January of the second year following the calendar year in which the change occurs.

Member States must apply minimum excise duties on cigarettes. This tax includes a specific excise duty per unit of the product, the ad valorem excise duty calculated on the basis of the maximum retail-selling price and the VAT proportional to the retail-selling price.

The overall excise duty on cigarettes is a specific duty and ad valorem duty excluding VAT, and is at least 57% of the weighted average retail-selling price of cigarettes released for consumption. That excise duty shall not be less than EUR 64 per 1000 cigarettes irrespective of the weighted average retail-selling price. Member States that levy an excise duty of at least EUR 101 per 1000 cigarettes, but the 57% requirement would have to meet. If a Member State as a wider rate of VAT on cigarettes, it may reduce the excise duty up to an amount equal to the increase in the VAT rate, expressed as a percentage of the weighted average retail-selling price.

#### Provisions applicable to tobacco products other than cigarettes

Member States shall apply an excise duty on tobacco products other than cigarettes which may be: an ad valorem duty calculated on the maximum retail selling price of each product; a specific duty expressed as an amount per kilogram or 1000 pieces; mixed tax combining an ad valorem and specific part.

The overall excise duty shall be at least equivalent to the rates or minimum amounts laid down as follows:

- Cigars and cigarillos: 5% of the retail selling price inclusive of all taxes or EUR 12 per 1000 items or per kilogram;

- Fine-cut tobacco for the rolling of cigarettes: 40% of the weighted average retail selling price or EUR 40 per kilogram;
- Other smoking tobaccos: 20% of the retail selling price inclusive of all taxes or EUR 22 per kilogram.

## **5 Market with tobacco products in the Czech Republic**

The next chapter describes the tobacco market in the Czech Republic and also outlines the situation on the global market.

### **5.1 History of tobacco products**

History of the tobacco market dates back to the 17th century, when there was a boom of the tobacco industry in the world. States have begun to establish the state tobacco monopolies. The first cigarettes began to be produced in 1843 in France. Great popularity had tobacco products even in our country. For example, in 1922 in Czechoslovakia was sold in 1 705 000 000 000 CZK smokes, which represented a tax revenue of 1 576 000 000 000 CZK. Central Directorate of tobacco overhead was subject to 97 tobacco factories in the Czech Republic, 6 of them were in Moravia, 5 of them were in Slovakia and 1 in Carpathian Ruthenia. In 1919, the tobacco industry was the livelihood for 18,000 people. From famous brands of the time can be mentioned for example products Zora, Sports, Egypt, Praga, Tatra, Dames, La Fleur, Bosnia, Slavia, Legion, Ghjubek, Yaka and Stambul. (Collector 2/09).

### **5.2 Tobacco products market**

Currently, the market for tobacco products in the Czech Republic there are the following 4 major tobacco companies.

- British American Tobacco (BAT)
- Imperial Tobacco (IT)
- Japan Tobacco International (JTI)
- Philip Morris International (PMI)

#### British American Tobacco

British American Tobacco is one of the leading manufacturers and distributors of tobacco products in the world. Founded in 1902, it is headquartered in London and is one of the five largest companies operating in this market in the world.

To illustrate - in 2013, the company sold 676 billion cigarettes worldwide. Its production was carried out in 46 locations in 41 countries. Number of employees BAT exceeded this

year 57,000 people. Its contribution to public budgets, governments around the world in 2013 amounted to more than 33 billion pounds, which is about 1 225 billion CZK.<sup>17</sup>

Among the world's best-known and best-selling cigarette brands includes Dunhill, Kent, Lucky Strike and Pall Mall. British American Tobacco, then outside the above brands also sell local brands. These local brands then include State Express 555, Vogue, Viceroy, Kool, Peter Stuyvesant, Craven A, Benson & Hedges and John Player Gold Leaf. For local brands on the market with tobacco products in the Czech Republic can be found, for example, the brand Vogue and Viceroy. Outside the cigarette company produces and distributes to markets around the world also other types of tobacco products, including cut tobacco, which in 2013 recorded a 7.5% growth in its sales. Also new is the production of its own brand of so-called electronic cigarettes.

#### Imperial Tobacco

The company Imperial Tobacco is a British multinational tobacco company. It has its headquarters in Bristol, UK. IT owns 51 factories around the world, which produces over 320 billion cigarettes annually, and its products are sold in more than 160 countries.

From their cigarette brands Davidoff cigarettes can appoint, West, Gauloises, L&B, Bastos, Parker & Simpson, Fin, USA Gold. Among their specific brand (targeted to the specific needs of consumers) include Route666, Style, Montecristo, Backwoods and more. Outside the production and distribution of cigarettes also focuses on other tobacco products, such as cut tobacco intended for smoking.

#### Japan Tobacco International

The company Japan Tobacco International is a member of the Japan Tobacco Group of Companies (JT), a leading international manufacturer of tobacco products. JTI was established in 1999 and is headquartered in Geneva, Switzerland. Currently, the company has more than 27,000 employees and sells its products in 120 countries worldwide. In 2013, he sold more than 416 billion cigarettes (or. Cigarette equivalents).

The company says on its website the eight most renowned brands, including brands Camel, Winston, Mevius / Mild Seven, Benson & Hedges, Silk Cut, Sobranie, Glamour and LD.

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<sup>17</sup> At the exchange rate of the CNB on August 12, 2014 ... 35,007 CZK / GBP.

### Philip Morris

Philip Morris International in the Czech Republic has its own branch - company Philip Morris ČR a.s. The company is a leading manufacturer and marketer of tobacco products in the Czech Republic. Czech PMI division employs approximately 1,100 people and is the largest retailer of tobacco products in the Czech Republic.

PMI history in our country dates from 1987. The former Czechoslovakian tobacco industry, the predecessor of the State Tobacco Inc., started the licensed production of Marlboro cigarettes. In 1992, PMI acquired a majority stake in state-owned companies Tobacco, Inc., since 2000 bears the name of Philip Morris. The factory in Kutná Hora is the only factory in the production of cigarettes and tobacco products in the Czech Republic. In 2013, the company had PMI Czech Republic 9 brands in 68 variants. Philip Morris Inc. own 99% of the shares in the subsidiary Philip Morris Slovakia sro (PMI Survey of Philip Morris, © 2002-2014).

## 6 The level of tobacco taxation and government revenue

The level of excise tax has an impact on government revenue. Hamerníková (1996) talks about the state budget as a financial balance (or a centralized monetary fund), which is used to meet the needs of public economics and fiscal policy objectives. It is also an important tool for public policy as such. It takes the form of budget law and is approved by the Chamber of Deputies of the Czech Parliament on a budget period.<sup>18</sup>

Excise taxes generally make up a significant portion of the state budget. In the Czech Republic during the reporting period, ie. between 2005 and 2013, earned revenues from excise taxes on average 13% of the total state budget revenues. Excise taxes on tobacco products averaged 4% of the total state budget revenues, while the share of excise taxes on tobacco products in total collection of excise taxes was approximately one-third. Particular values are listed in Table. 2.

Table no. 2: State Budget and excise duty in the Czech Republic

Year	State budget of the Czech Republic		Collection of taxes	Collection of taxes on tobacco products	The share of excise taxes on tobacco products in total collection of excise duties	Excise taxes as % of state budget revenues	Excise duty on tobacco products as a % of state budget revenues
	Revenues	Expenses					
	bill. CZK	bill. CZK					
			bill. CZK	bill. CZK	in %	in %	in %
2013	1091.86	1173.10	136.40	46.80	34.31	12.49	4.29
2012	1051.39	1152.40	139.60	47.00	33.67	13.28	4.47
2011	1012.76	1155.50	139.20	45.00	32.33	13.74	4.44
2010	1000.38	1156.80	130.90	42.50	32.47	13.09	4.25
2009	974.62	1167.00	123.80	37.70	30.45	12.70	3.87
2008	1063.94	1083.90	125.60	37.50	29.86	11.81	3.52
2007	1025.88	1092.30	131.60	47.00	35.71	12.83	4.58
2006	923.06	1020.60	112.60	32.20	28.60	12.20	3.49
2005	866.46	922.80	103.70	25.40	24.49	11.97	2.93

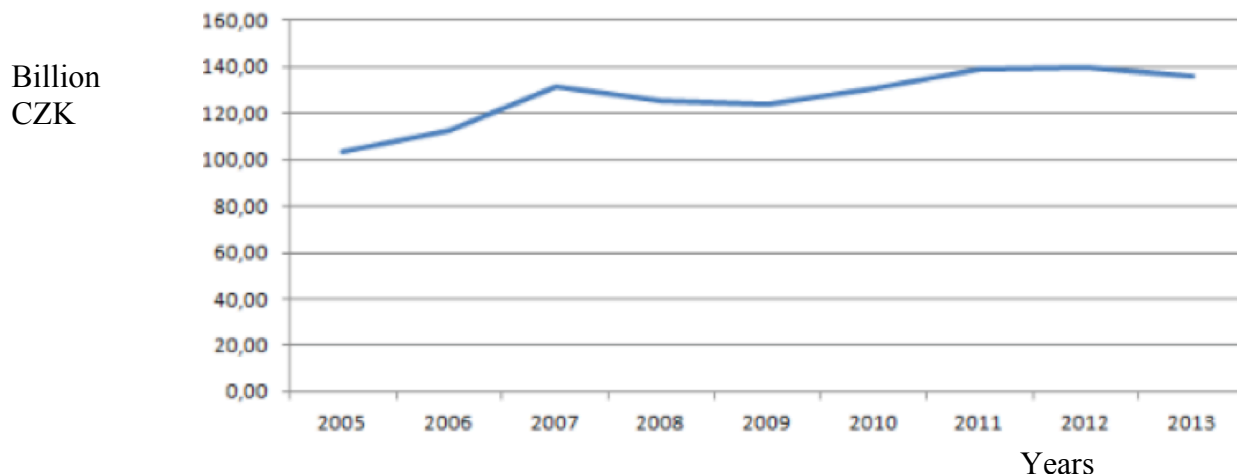
Source: own processing

Revenue from excise taxes on tobacco products can be subdivided according to the groups of tobacco products. They are monitored separately with tobacco stamps and "other" tobacco products (cigars, cigarillos, smoking tobacco).

<sup>18</sup> In the Czech Republic is the budget period one calendar year



Graph no. 6: excise taxes in the bill. CZK in the Czech Republic



Source: own processing

The chart above shows the state budgetary revenue from excise taxes on alcohol, beer, wine and intermediate products and tobacco products between 2005 and 2013. It shows that from 2005 to 2007, income from excise taxes grew total. Between 2008 and 2009 there was a decline in excise taxes from 2010 can be seen a slight increase, but that in 2013 slightly decreased. This chart reflects changes in the collection of excise duty on tobacco stamps that are decisive quantity State budget revenue from taxes on sales of tobacco products. The following table summarizes the levying of excise duty on tobacco products and labels in the Czech Republic in the years 2005-2012.<sup>19</sup>

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<sup>19</sup> For 2013, no information about a specific allocation of revenues from excise taxes on tobacco products released.

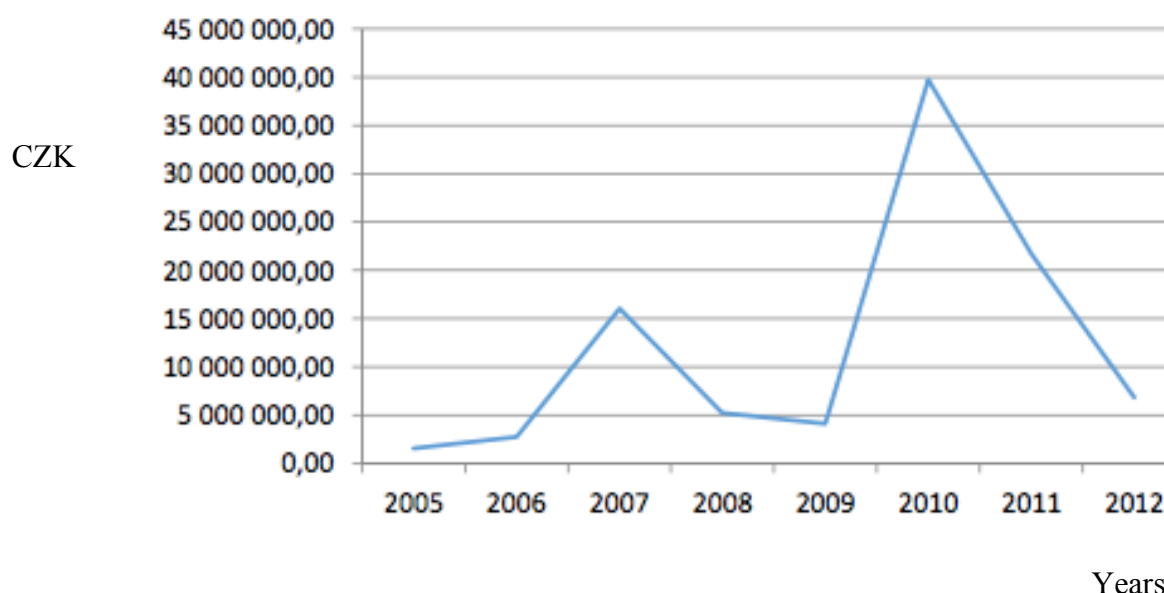
Table no. 3: Selection of excise duty on tobacco products and tobacco stamps in the Czech Republic between 2005 to 2012 (CZK)

Year	Collection of taxes in the Czech Republic					
	Tobacco stamps			Tobacco products		
	Domestic	Imports	Total	Domestic	Imports	Total
2005	25 426 339 154.00	-	25 426 339 154.00	1 044 365.00	514 592.00	1 558 957.00
2006	32 238 606 789.00	-	32 238 606 789.00	3 799 380.75	-1 048 881.00	2 750 499.75
2007	46 981 524 920.00	-	46 981 524 920.00	15 929 248.89	116 141.00	16 045 389.85
2008	37 501 246 427.00	-	37 501 246 427.00	-1 396 380.93	6 622 145.00	5 225 764.07
2009	37 699 863 725.00	-	37 699 863 725.00	9 702 256.36	-5 578 841.00	4 123 415.36
2010	42 427 028 824.00	-	42 427 028 824.00	40 213 887.03	-480 809.00	39 733 078.03
2011	44 936 211 373.00	-	44 936 211 373.00	21 329 052.98	357 822.06	21 686 875.04
2012	46 994 644 487.20	-	46 994 644 487.20	4 236 101.35	2 601 844.00	6 837 945.35

Source: Customs Administration; my customisation

The Czech Republic has the obligation to mark cigarettes<sup>20</sup> of tobacco stamp, whose value corresponds to the amount of tax. Therefore, revenues from the tobacco tax stamps represent a substantial part of the revenue from excise taxes on cigarette sales. Among the "other" tobacco products include cigars, cigarillos and smoking tobacco. Values in Table no. 3 also demonstrate the following charts where you can see the evolution of revenues from excise duties, and especially of tobacco products, especially from tobacco stamps (cigarettes).

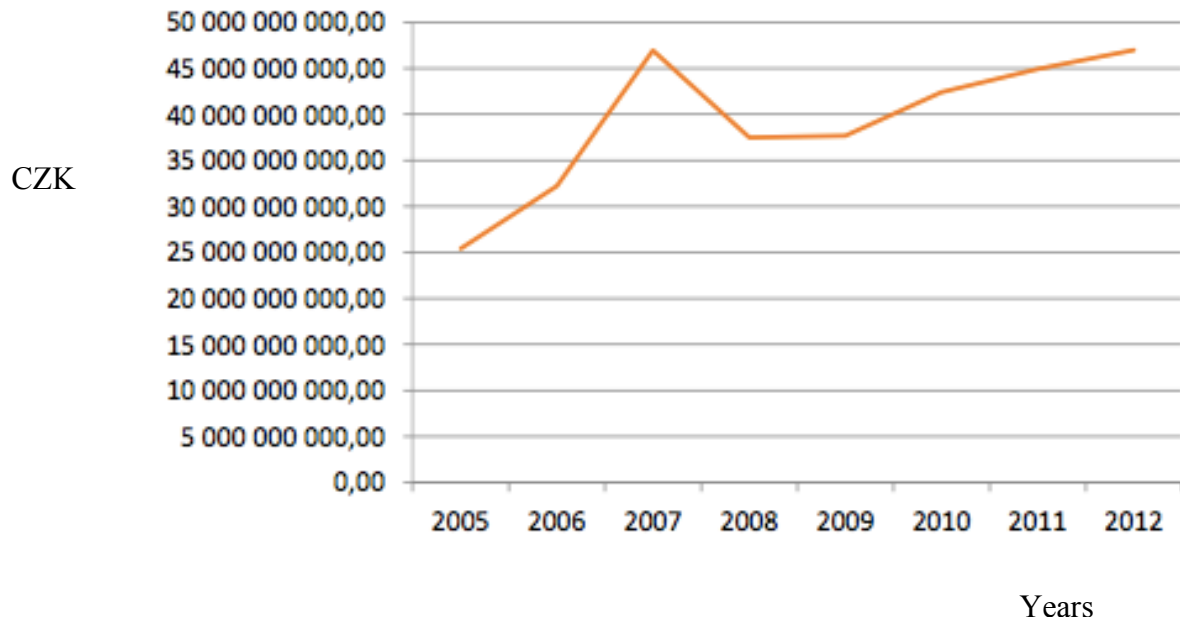
Graph no. 7: Selection of excise duty on tobacco products



Source: Table no. 3; my customization

<sup>20</sup> Containing according to Act no. 353/2003 Coll. the Excise Tax of 20 cigarettes.

Graph no. 8: Selection of excise duty on tobacco stamps



Source: Table no. 3; my customization

According to information from the Customs Administration of the Czech Republic chose to become in 2005 the excise duty on tobacco products by 1.3 bn. CZK more than the assumption of State Budget Act,<sup>21</sup> despite uneven consumption of tobacco stamps - the amendment to the Law on Excise Tax occurred from July 2005 to increase tax rates on cigarettes. For this reason, in the first half of this year, cigarette manufacturers to stockpile<sup>22</sup> tobacco stamps, which in turn meant a significant decline after the imposition of that tax in the second half of the year, namely from September to December, 2005.

Called. frontloading means that as a result of the announced increase in the tax rate on tobacco products manufacturers, eventually. Cigarette importers buy in bulk even tobacco stamps, a lower tax rate, in an effort to save money, respectively. at least maintain its profit margins.

<sup>21</sup> Representing a change of + 5.4% compared to the original assumption. For more information see subchapter expected vs. actual revenues of the state budget.

<sup>22</sup> So called frontloading: to the announced increase tax rates on tobacco products manufacturer, the importer of cigarettes respond to excessive buying tobacco stamps loaded with a lower rate of taxation. This causes uneven tax legislation in time.

But the question remains whether such frontloading is ultimately "win". Relating this example, the firms "Big Three",<sup>23</sup> which are the ones that make the effect of stockpiling reflected in the state budget revenues, it means for them out of benefits in terms of economies of difference in tax rates, also significant cost and some risk. Within a very short time to purchase tobacco stamps to spend large amounts of funds to hire more labor, incur extraordinary expenses for risk assessments and optimization, so that they know how much tobacco stamps it was worthwhile to buy in advance, and accordingly adjust the production of cigarettes the current and following year. At the beginning of the next season - after changing the excise tax rates - even then "draw" of stocks, which are stocked, and that means restricting production.

The State is trying to solve this issue, since the increase in excise duties occurs quite often, and stockpiling effect is not unique. This year the planned legislative changes, which would have the effect to suppress / eliminate. Director of External Relations and Communications Ministry of Finance of the Czech Republic indentation z března report this year said že Ministerstvo Finance has submitted for comments amendment to the Act č. 353 / 2003 Sb. the Excise Tax Act. The amendment also includes a proposal for regulating the aforementioned frontloading. The regulation should refer to the possibility of sales of tobacco products with old tobacco stamps, and by establishing a three-month deadline for the clearance sale. The press release stated that the regulation was a long frontloading demanded by both state institutions as well as representatives of the tobacco industry. State institutions from the control of frontloading promise even filling budget revenues and representatives of the tobacco industry are again convinced that this regulation can help to ensure the stability of the market.

Demand for State regulation is understandable. Frontloading is a common phenomenon causing fluctuations in public budgets, so it is logical that the Finance Ministry tries to minimize this effect, or ideally eliminate. At first glance, it seems illogical that the demand for the regulation of frontloading comes from the tobacco companies. Tobacco manufacturers stocking up on tobacco stamps not only cost savings resulting from the difference between the amount of taxes on tobacco stamps before and after the increase in excise rates, but also increase costs - is needed to properly study and calculate the amount

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<sup>23</sup> Slang name for the three largest tobacco companies in the Czech Republic - Czech Republic Philip Morris, British American Tobacco and Imperial Tobacco CR.

of labels, which it pays to stock up. This requires increasing cost of specialized personnel (analysts), business (market research), etc. The company must also release unexpectedly large portion of the funds that are needed to purchase more than the planned amount of tobacco stamps, meaning growth of the company's costs.

Despite the fact that the manufacturers it means the necessity of changes in the quantity of production, which represents a further increase in costs (purchase of raw materials needed to manufacture cigarettes, labor costs<sup>24</sup>, etc.). The company, Which overstock tobacco stamps, takes on market risk in the form of costs linked to tobacco labels, since the development of sales of cigarettes might not be estimated (new state regulation, changes in demand, the substitution of goods, etc.). Appropriately chosen strategy of frontloading the tobacco stamps in turn can be a competitive advantage for a company operating in the tobacco market. The sector accounts for only a very few companies. It is quite possible that for these companies is a better option kind "agreement on a joint demand for regulation" rather than risk variant frontloading associated moreover with certain uncertainties.

Returning to the table no. 3 - a massive stockpiling occurred in 2006. According to the Customs Administration of the Czech Republic increased tax collection by 6.8 bil. CZK, which represented 26.8%. Manufacturers and importers had responded to approximately one-fifth increase in rates of excise duty from tobacco products and took significantly higher amounts of tobacco stamps, representing a total volume of 88% consumption of tobacco stamps of the previous year.

The increase in collection of excise taxes on tobacco products and labels occurred in 2007. pared with prior year 2006 tax collection increased by almost CZK 15 billion, ie. By almost 46%. This increase is the result of an increase in the tax rate on cigarettes from 1.1.2008.

In 2008 compared to the previous year, revenues fell by about one fifth, ie. By just under 9.5 billion. CZK. Initial estimates of revenues this year were too optimistic and did not take account of repeated increase in excise duty.<sup>25</sup> The repeated increase in excise tax raised again massive stockpiling manufacture floor space while lowering tax rate.<sup>26</sup> For this reason, in September 2008, still on the shelves of retailers have seen a pack of

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<sup>24</sup> The producer needs to produce larger quantities of cigarettes. This logically requires either hire more workers, or the existing number of workers to expand production, therefore, overtime pay, bonuses, etc.

<sup>25</sup> It was an increase on 1.3.2007 and 1.1.2008.

<sup>26</sup> A substantial portion of stockpiling effect was evident already in the budget revenue of 2007.

cigarettes marked with a tobacco stamp design "E", which featured the tax rate valid till 31.12.2007.

The constant increase in the excise tax on tobacco products has brought some interesting effects. Rational substitution meant that consumers began to gradually move to products with a lower selling price. Cigarette manufacturers confirm this trend, and it started to adapt its production portfolio and pricing policies. This led to a gradual increase in the volume of production cheaper brands of cigarettes at the expense of more expensive, which is logically reflected in the collection of excise duty.

Excise taxes on tobacco products in r. 2009 dramatically altered. Year difference in tax collection was only CZK 197.5 million, representing a + 0.5%. However, the fact is the estimate differed by less than 25%, and a negative sign. Originally calculated the selection of around 50 billion CZK, but the reality was about 12 billion CZK lower.

With effect from February 1, 2010 increased excise tax on cigarettes and smoking tobacco, on average by 4.5% compared to the rates in force until the end of January 2010. Despite the increase in the tax rate did not significantly r.2010 frontloading of tobacco stamps. Even the price of cigarettes and tobacco remained throughout 2010, more or less constant. Compared to the previous year, the increase in collection of excise duty by almost 13%.

In 2011, a modest effect frontloading, in connection with an increase in tax rates from 1 January 2012. The market for cigarettes in the Czech Republic was mainly affected by the continuing economic recession and changes in lifestyle.

In 2012 there was again a slight increase in the levying of excise duty on tobacco products by about 4.5% over the previous year. Year increase was mainly due to stockpiling manufacturers and importers of cigarettes the tax rate, which was effective until the end of 2012. In connection with the increase in tax rates from 1 January 2013 customers bought tobacco stamps in 2012 by nearly 100 million tobacco stamps more<sup>27</sup>, than the normal annual average. Excise taxes on tobacco commodity this year was also positively affected by an increase in retail prices of tobacco products, where manufacturers and importers increased the prices of cigarettes in the period from January to May 2012, an average of 2-3 CZK / package.

Czech Statistical Office and the Customs Administration of the Czech Republic recorded a change in consumer behavior that was partly due to the economic recession, but also by

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<sup>27</sup> The quantity of labels corresponds to about 2 billion pieces of cigarettes.

extending a healthy lifestyle, innovation of products for quitting smoking or smoking substitutes.

## 7 Consumption of tobacco products

The next chapter focuses on the consumption of tobacco products and analyzed its development in the Czech Republic for the past 10 years. For simplicity considering only cigarette consumption, since the consumption of other tobacco products are not available relevant data.<sup>28</sup>

Table no. 4: Cigarette consumption per capita in the Czech Republic per calendar year

Year	Consumption units in the CR	Mid-year population of the CR	The number of cigarettes / 1 inhab.
2012	20 461 579 842	10 509 286	1 947
2011	20 867 383 936	10 496 672	1 988
2010	21 328 976 919	10 517 247	2 028
2009	21 727 879 932	10 491 492	2 071
2008	21 975 361 044	10 429 692	2 107
2007	24 210 019 190	10 324 102	2 345
2006	24 003 418 348	10 266 646	2 338
2005	23 282 559 300	10 234 092	2 275
2004	22 894 128 289	10 206 923	2 243
2003	22 362 018 992	10 201 651	2 192
2002	19 896 791 067	10 510 719	1 893

Source: Czech Statistical Office; own processing and calculations

The above table includes data from the Czech Statistical Office on cigarette consumption per capita<sup>29</sup> in the Czech Republic from 2002 to 2012. These data does not include the consumption of cigars or tobacco.

From the above data shows that consumption of cigarettes increased from 2002 until 2007. Since 2008, we observe the contrary, the continuous decline in cigarette consumption per capita.

On the chart below describes the progress cigarette consumption per capita of the Czech Republic from 1989 to 2012. The consumption of cigarettes from 1989 showed a fluctuating trend. In 2001, there was a six-year period of continuous growth in consumption, which lasted until 2007. The turning point came in 2008, when up to now observe a steady decline in cigarette consumption.

Reasons for the decline in consumption may be several. The first offers a pack of cigarettes price increases, mainly due to the constant increase in excise tax. Economically-minded consumers could seek to reduce their cigarette consumption, either by reducing the

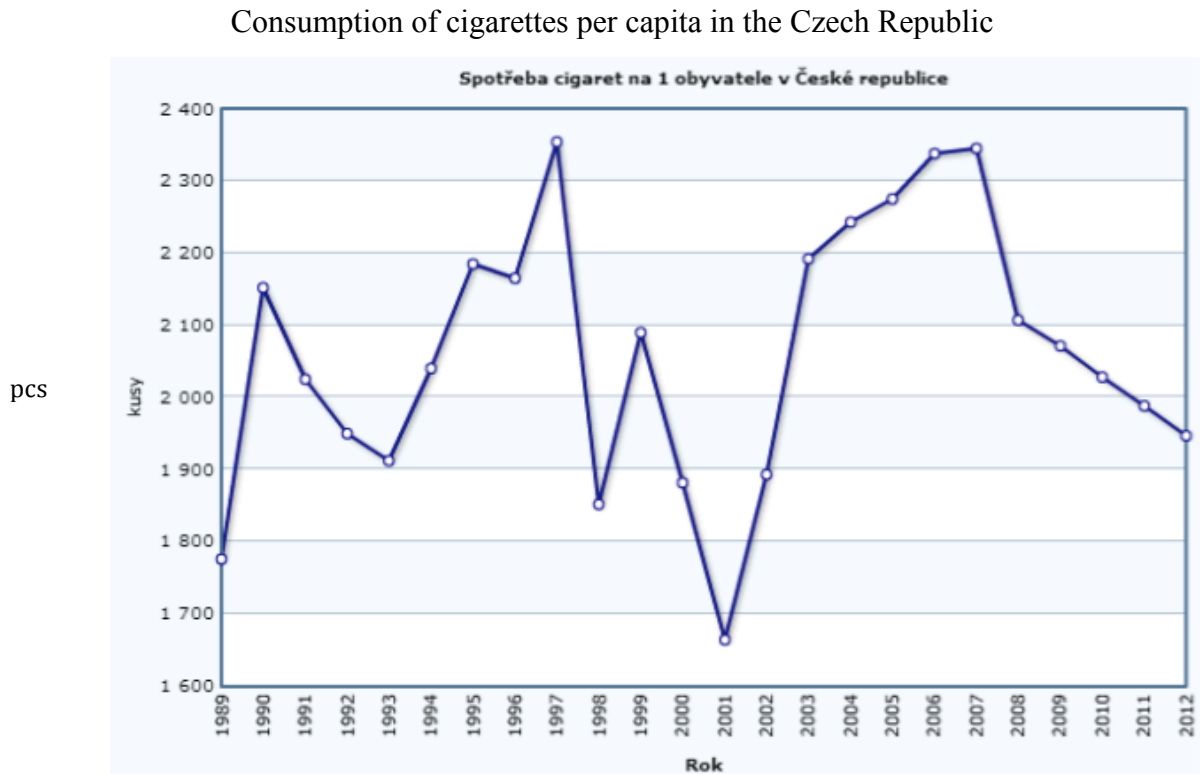
<sup>28</sup> Hence, the segment of these products is very wide.

<sup>29</sup> The current state is always to 1.7. respective year. As stated in the methodological note of the Czech Statistical Office, consumption of individual items on cigarettes was calculated as the average per 1 inhabitant of the Czech Republic, which was given to middle class population to 1.7. in a given year.



consumption of cigarettes, stop smoking or switched to other forms of tobacco, such as cigars, cigarillos or smoking tobacco, or cigarettes attempted otherwise substituted.

Graph no. 8: Cigarette consumption per capita in the Czech Republic



Source: CSO

Year

## 7.1 The consumption of tobacco products and the state budget

Take a closer look at the evolution of the consumption of tobacco products or cigarettes; it is interesting to compare this trend with the development of budget revenues from excise from tobacco products. Logically, it should benefit to the Treasury copied the trend of consumption of tobacco products. Monitored data, however, show that despite declining cigarette consumption, revenue from excise taxes on tobacco growing.

Consumers as a result of increasing cigarette switched to smoking tobacco, which is cheaper than cigarettes and seems to be their good substitute. Total revenue from excise taxes on tobacco products includes revenue from both the tobacco stamps, which are

marked by cigarette packaging as well as other tobacco products such as cigars, cigarillos and smoking tobacco.

The following table shows that consumption of cigarettes has since 2008, a declining trend, while revenue from excise taxes on tobacco products are from the same year an increasing trend, although in that year there was a rapid reduction in excise revenue. This turnaround was due to overly optimistic estimates of excise revenue from tobacco products, or failure to take account of repeated increase in excise duty and stockpiling effect.<sup>30</sup>

Table no. 5: The consumption of cigarettes and revenues from excise taxes on tobacco products during the period 2005-2012

Year	Total consumption of cigarettes (pcs)	Total consumption of cigarette packages (pcs)	Collection of excise taxes on tobacco products
2012	20 461 579 842	1 023 078 992	47 000 000 000
2011	20 867 383 936	1 043 369 197	45 000 000 000
2010	21 328 976 916	1 066 448 846	42 500 000 000
2009	21 727 879 932	1 086 393 997	37 700 000 000
2008	21 975 361 044	1 098 768 052	37 500 000 000
2007	24 210 019 190	1 210 500 960	47 000 000 000
2006	24 003 418 348	1 200 170 917	32 200 000 000
2005	23 282 559 300	1 164 127 965	25 400 000 000

Source: Ministry of Finance, State closing account of the Czech Republic 2005-2013; Portal Customs Administration; CSO; own calculations and processing

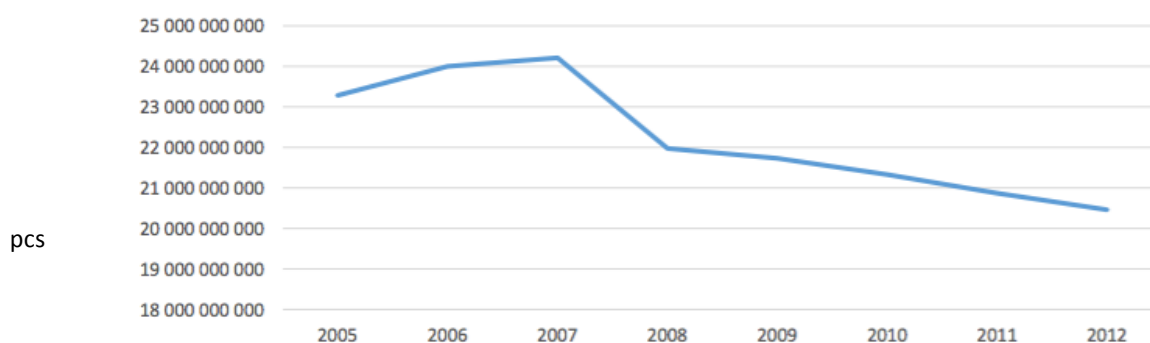
\*1 package contains 20 cigarettes

For greater clarity on the following graphs shows the evolution of cigarette consumption (Graph no. 9) and the development of the levying of excise duty on tobacco products (Graph no. 10). The course of the two curves are different, which confirms the above hypothesis that declining cigarette consumption have a big impact on government revenue from excise duties, as consumers cigarettes are replaced either with cheaper brands, or consume other tobacco products such as cigars, cigarillos and smoking tobacco.<sup>31</sup>

<sup>30</sup> Yet in September 2008, was seen on the shelves of a pack of cigarettes marked with a stamp in 2007.

<sup>31</sup> The aforementioned is confirmed by the statement by the Chairman of the Board and Chief Executive Officer Philip Morris CR, a domestic manufacturer and leading distributor of tobacco products in the Czech Republic, Andras Tövisi who in 2014 in an article for server Lidove noviny mentioned that consumers switching to cigarettes at a cheap price segment and fine-cut tobacco with lower tax burden. He also stated that there is inter alia to the increased incidence of illegal tobacco products. Illegal tobacco products are discussed in a separate subsection of this work.

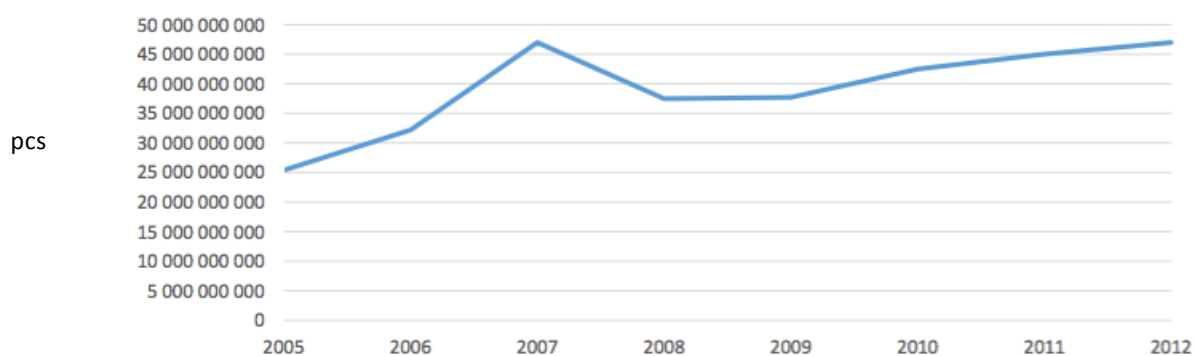
Graph. 9: Development of cigarette consumption (in units) during the period 2005 to 2012



Source: own processing

Year

Graph. 10: Development of the collection of excise duty on tobacco products in CZK in the period 2005-2012



Source: own processing

Year

## **8 Regulation of tobacco products**

Tobacco products belong to the group of products that are subject to long-term strong state regulation. This chapter summarizes the main regulation of tobacco products, which takes place in the Czech Republic.

### Advertising regulation

Advertising in the case of tobacco products has long been regulated. In most countries, tobacco advertising on television, radio, printed periodicals and other public media completely or totally disabled.

Regulation of advertising of tobacco products is made by tobacco companies partially supported (health warnings, ban tobacco advertising in the media, etc.). Discussed, however is regulation banning exposure at the point of sale. As an argument, the company reported that in many countries the display of products, one of the latest methods of competition among tobacco companies. If there is a ban, it is virtually impossible to market tobacco products to introduce new brands of these products, or to expand existing brands. The regulation provides that market well-established brands and manufacturers with a competitive advantage. The result of this regulation, then it may be that the basic means of competition between different brands will become price formation. Greater price competition, and the related lower price cigarettes, in the opinion of representatives of the company, then the opposite of public health policy, because reducing the price of cigarettes and tobacco products will be of greater accessibility for a larger range of consumers. Each regulation has economic consequences. The economic impact of the ban on tobacco advertising were for the years 2000 - 2004 on the basis of calculations and estimates of direct and indirect losses quantified total of 2 to 3 billion CZK (Liberal Institute, 2000). Of these impacts, for example, let us negative impact on sales of businesses, increasing unemployment, reduced incomes of municipal budgets etc.

#### Other regulations

The subject of regulation of tobacco products as well as the following:

- measuring and reporting tar, nicotine and carbon monoxide in cigarette smoke (valid for most countries);
- upper limits for tar, nicotine and carbon monoxide in cigarette smoke (valid for European Union Member States and 50 other countries);
- measuring and reporting to governments certain smoke emissions (chemicals) associated with tobacco-related diseases (Canada, Brazil, Venezuela, Taiwan and Korea);
- Set limits on additives in tobacco and other components of cigarettes or other tobacco products (France, UK, Germany)
- standards for cigarettes with reduced ignition.<sup>32</sup> (Canada)

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<sup>32</sup> Regulation approved by the European Commission Decision (2011/496 / EC). This is a mandatory requirement for cigarettes increased probability of flame retardance if they are left unattended. November 17, 2011, all cigarettes sold in the EU, including the Czech Republic must meet this standard.

Other regulations, for example - mandatory health warnings on cigarette packages and efforts to establish a single pack of cigarettes, regulating additives in tobacco products, regulation of tobacco smoke, and so on. (PMI, Regulation of tobacco products, online).

Each regulation carries a number of side effects and cause a change in consumer behavior (see explanation above Peltzmanova effect). In addition, an increase in regulation gives space for growth of the black market - each regulation is also entails additional costs for the manufacturer or distributor.

## 9 Tobacco substitutes

The price of tobacco products in the context of raising excise duty increases and thus represents a greater financial burden on consumers. They often try to seek alternatives, ie options to cigarette or tobacco substitute. Tobacco products, however, are characterized as Scene goods inelastic demand. Inelasticity of itself is a signal that these products do not have full-fledged substitutes. If they were, people would react to an increase in prices of tobacco products by reducing the quantity demanded and started by buying substitutes. Demand for these substitutes would naturally grown so much, how much would reduce the demand for tobacco products.<sup>33</sup>

Despite the individualization each person's preferences of market behavior can be observed, what could be considered as substitutes for tobacco products. Changes occurring in recent times is the market of tobacco products is reflected by changing the structure of sales of the brands in the medium price segment to cheaper brands and cut tobacco, designated for smoking. It is possible to say that cheaper cigarettes and tobacco are a good substitute for more expensive brands of cigarettes.

The most recent trend are the so-called electronic cigarettes. It is a product that their appearance resembles a cigarette. Act no. 305/2009 Coll. defines an electronic cigarette as "... the product mimics the function of a tobacco product or tobacco needs whose purpose is inhaling nicotine vapor, including accessories such products." (Art. I, § 2, para. j)

Electronic cigarettes, however, are on the market very short time. It is therefore not possible yet to analyze whether playing on the tobacco market a greater role, and therefore whether they can be a good substitute for these products.

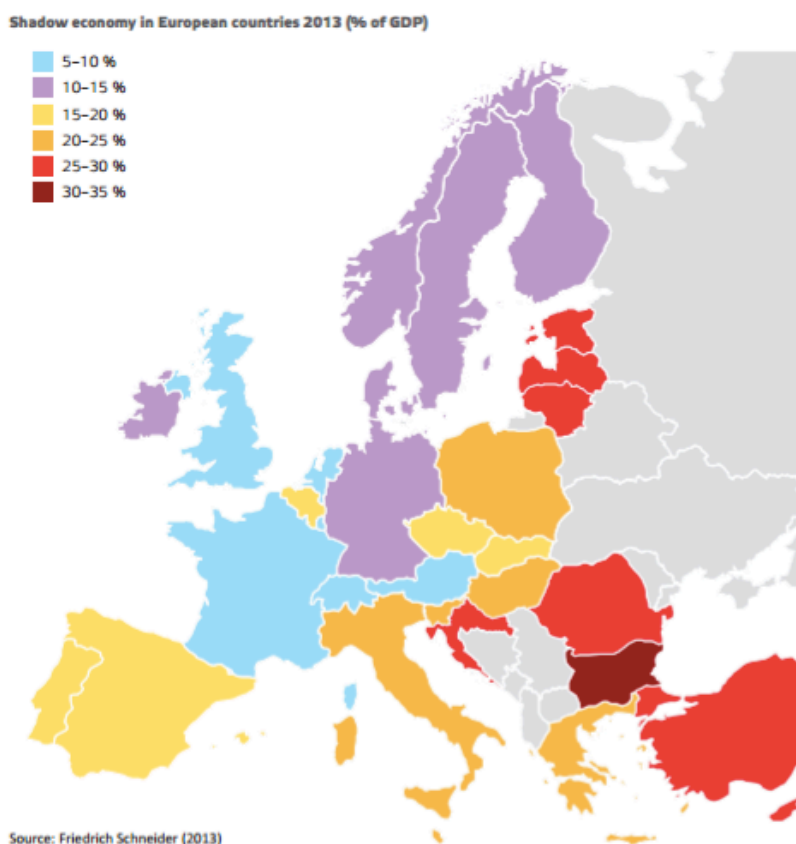
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<sup>33</sup> Assuming the existence of a single substitute and that no one would smoke ceased and everyone would try to replace tobacco with something else.

## 10 Tobacco products and illicit market

The shadow economy is an integral part of the highly regulated markets of consumer goods, including tobacco products. One of the most respected economists engaged in research in this area is Friedrich Schneider of the Johannes Kepler University in Linz. He created a methodology to estimate the black market were applied among others in the study Lithuanian Free Market Institute (LFMI, 2013). The figure below shows a map of Europe and the percentage of illicit market economies.

Fig. 3: The Shadow Economy in selected European countries in 2012 (as% of GDP)



Source: LFMI (2013)

The market in counterfeit and contraband cigarettes is part of shadow economies worldwide. Mainly related to high taxation of cigarettes and tobacco products and the nature of demand for those goods - both increase the profit potential of all entities participating in illegal transactions. High tax burden, and therefore the high price of goods to counterfeit or bootleg motivate these products and sell them at a lower price with higher gain. Black market brings with it a great many negative consequences that impact on

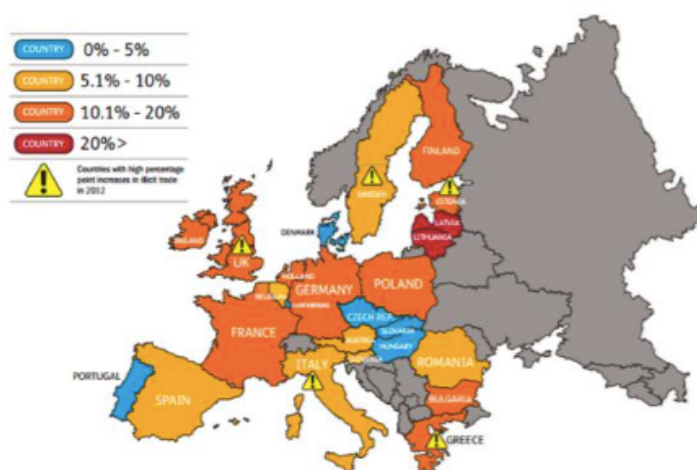
consumers, manufacturers and not least to the state. The consumer buys cigarettes that do not meet standards, and greatly increase the negative impacts on human health. Official manufacturers generate lower revenues, but also can cause damage to their reputations if the smuggling and counterfeiting of brands of cigarettes. Of course, the state is losing a significant portion of tax revenues associated with the official sales (consumption) of cigarettes.

The market for tobacco products can meet so. Illegal cigarettes. They are those which penetrate or are sold on the market in contravention of tax and other laws and regulations. This may include cigarettes without paying import duties, excise duty or value added tax. Illegal cigarettes can be genuine products made by the trademark owner or under the authority granted to the owner of the trademarks that are sold without paying taxes or counterfeit cigarettes, which were made without the consent of the trade mark owner.

According to estimates of the World Health Organization (WHO, 2013) is illegal, unregulated black market in cigarettes 9-11% of global consumption. The report produced by KPMG LLP (KPMG) states that in the European Union in 2010 consumed approximately 64.2 billion illegal cigarettes. It is estimated European Office for Anti-Fraud Office (OLAF) corresponds to annual losses in national income and revenues from the EU amounting to approximately 10 billion euros per year.

In the picture below is seen an estimate of the illegal trade in Europe, which was prepared by KPMG in 2012.

Fig. 4: Illegal trade in selected European countries



Source: KPMG, Project Star 2012; Allen (2013)



As the figure shows, the Czech Republic ranks among European countries with a lower percentage of illegal market. Our country belongs to the group of the state with the least represented black market. According to an estimate by KPMG Czech Republic falls somewhere in the interval 0-5% of the total market, which is confirmed by expert estimates.

The worst what percentage of the amount of the illegal trade in cigarettes is concerned, are from European countries, Lithuania and Latvia, and especially because of the geographic proximity of Belarus. The results of the study think-tank LFMI (2013) have shown that a loss of tax revenue due to the existence of the black market corresponds to the equivalent of 2.5 billion CZK (341 million LT).<sup>34</sup>

#### „Empty Pack Surveys“

Tobacco giant Philip Morris works with data from the so-called "Empty Surveys Pack", which means that they hire a company that collects them empty cigarette cartons. On the basis of the collected packaging from cigarettes subsequently determines what proportion of these packages represent contraband cigarettes. This research is part of a report by KPMG, which for Philip Morris, collects these results, and then interpret in a comprehensive report. The latest report published by KPMG on the subject from 2012.

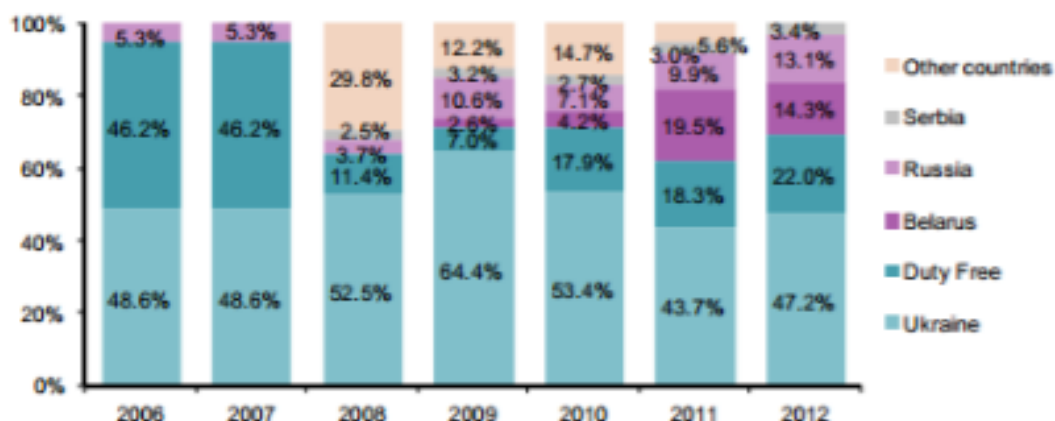
The Czech Republic cigarettes are smuggled across the eastern border of the country. The following figure shows the share of counterfeit and smuggled cigarettes in the Czech Republic between 2006 and 2012. The figure shows that most of the illegal cigarettes to us flows from Ukraine. Then they occupy a larger percentage of undeclared cigarettes, smaller proportions than cigarettes from Russia, Belarus, Serbia and other countries.

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<sup>34</sup> Translated using the average exchange rate of CZK / LT for the year 2012 (<http://www.kurzy.cz/kurzy-men/historie/rok-2012/>)

Graph no. 11: The share of counterfeit and smuggled cigarettes in the Czech Republic between 2006 and 2012

Share of C&C by origin  
2006-2012<sup>(1)(2)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by analysing consumer research which records the volume and brands purchased legally from other countries.

Sources: (1) KPMG EU Flows Model and interviews with PMI Local Management

(2) Synovate/Ipsos ND(L) research 2012 (Ipsos acquired Synovate in 2011)

Source: KPMG, Project Star (2012)

## 10.1 The black market in the Czech Republic

This section contains information on the status and development of a black market in the Czech Republic. Results KPMG study (2012) estimate the size of the black market with tobacco products in the interval from 0 to 5% of the total market.

Illegal trade in tobacco and tobacco products has long been among the most profitable organized crime. For example, in 2012, revealed the Customs Administration in the illegal trafficking of cigarettes and tobacco 749 cases of violation of the legislation. The total estimated leak customs duty and tax amounted to 582 million CZK.

Customs Administration (VZ 2012, pp. 46-47), ensured this year more than 17 million cigarettes and 431 tonnes of tobacco. Compared to the previous year, the increase in the number of illegal tobacco, and logically also increase tax and customs evasion in CZK, and were recorded three lines of crime on tobacco products. The first was the discovery of

illegal transportation of tobacco and tobacco products after the so-called Eastern route. More smuggled cigarettes in 2012 flowed into our country from Belarus and tobacco products, which in the past were smuggled out of Ukraine through Poland and Slovakia, were distributed through Hungary and Slovakia. The second direction was the Asian route. After we were smuggled into our country illegal tobacco products from China and Vietnam. From this route through our country, these products continue to flow into the southern European ports, particularly to Greece. The third was pursued toward detecting illegal factories napadělky tobacco in our country. In 2012, the three managed to uncover illegal cigarette factories in the Czech Republic.

## **10.2 Consequences of the black market in tobacco products**

The following sub chapter is devoted to the possible consequences of the black market in tobacco products. The existence of the black market because ssebou carries many side effects that have an impact on the economy and society as a whole. If we look at the black market in tobacco products, especially in terms of the following:

### Violations of laws and organized crime

On the black market are constantly violated laws and regulations. The greater the share of the black-market economy, the more and more are being violated regulations and laws. The very existence of a certain amount of illegal trade can give a signal that in the state is non-hazardous to cheat, and therefore the rules and rights may not be respected as generally expected in a democratic country with developed market economies.

Furthermore, the larger the black market, the more people are involved in illegal activities. Emerging organized crime "can not think" just another sector of the economy grows but social structures, which paralyzes another fight with him, and the associated corruption.

### Health impacts

It is indisputable that smoking is harmful to health. However, consumption of illegal tobacco, which grows in direct proportion to regulate prodražující production costs and prices for the end consumer, may lead to even more serious consequences for the health of the individual than the consumption of cigarettes legally produced and imported. Producers

of illegal tobacco products put into the mixture raw materials that do not meet health standards, or even ingredients that are directly hazardous to health.

#### Impacts on public budgets

Tobacco products are goods that are burdened by high levels of taxation. Illegal tobacco products deplete the possible gains from these taxes, which would potentially flow to public finances if consumers consumed legal tobacco products instead of those that come from the black market.

With public budgets is also related to the previously mentioned effects of the black market. Negative impact on the health of consumers of illegal tobacco products will translate into increased demand for health services, which are a public good.

#### Impacts on manufacturers and importers of legal tobacco products

In addition to the state and consumers, the existence of a black market also has negative consequences for manufacturers and importers of tobacco products legally produced. The black market obviously pumped official producers and distributors of revenue from sales. Very often, they are counterfeited reputable brands such as manufacturers. However, these illegal counterfeits do not meet the requirements, which in practice are levied on a product (health standards, flavor and other characteristics). It can therefore easily be aggravated by the reputation of the brand among consumers consuming illegal counterfeits, and the subsequently damage the reputation of the manufacturer.

## **11 Anomalies in the collection of excise duty on tobacco products**

The next chapter is devoted to a summary accompanying phenomena associated with changes in the taxation of tobacco products. These accompanying phenomena can be called "anomalies", in the sense that most of them were not originally planned and could cause a distortion of the market in tobacco products. In this context, we can talk about the action Pelzman effect on the tobacco market - setting change in market conditions cause not only predicted phenomena, but also those originally unintended. This is particularly the following effects:

### Frontloading the tobacco stamps

The phenomenon of stockpiling the tobacco stamps that indicate the cigarette packaging is a rational response to the constant increase in excise tax on tobacco products, hence for cigarettes. Goes onakoupení tobacco stamps an included matching the current rate of excise duty beyond the originally planned number of pieces in anticipation of the increase. After the increase sale stocks of labels with corresponding lower rate. Frequent increase in excise duty this pattern of behavior and its impact highlights. Therefore, we see the demand for regulation of frontloading, both by government and by manufacturers of tobacco products. Government (state budget) due to the frontloading of losing a significant portion of expected revenues. Even the demand for regulation by the cigarette manufacturers for a reason: frontloading the tobacco stamps for them at an increased risk associated with additional financial costs. It is necessary to issue a larger amount of funds to buy stamps than originally anticipated, it is also necessary to optimize production, if necessary, hire an additional number of workers (analysts, risk managers, production workers and other professions).

### Changing consumer preferences

With the increase in the price of cigarettes may be the last time to market tobacco products to observe changes in consumer preferences. Consumers are moving from more expensive brands of cigarettes to those cheaper. From the cigarette market virtually disappeared so. "Middle segment" - the market remained a symbol only "low-costových" cigarette or not

"luxurious" brand. Segment most expensive brands of cigarettes changing consumer preferences noticed almost as consumers of these brands are not usually a problem sjeich increasing cost, eventually. change / increase prices for them no reason to change the marks on which they base. Conversely, smokers who have reached for the cigarettes from the so-called. Middle segment, recently transferred to the "low-cost" version cigarettes, eventually. a different kind of tobacco products (eg. smoking tobacco). Price changes and the higher numbers is no longer a reason for them to change their preferences.

The above change of the cigarette market, respectively tobacco products related to increasing the excise tax on cigarettes, whose price as a result of this increase is rising. The question then is, therefore, whether the increase in taxes has the opposite effects than the proposed increase in the income of public budgets. For "low-costových" cigarette brands to a greater degree pays only the minimum excise duty as well as a designated tobacco smoking. Luxury brand cigarettes account for only a small percentage of the market.

From the graph no. 5 shows that cigarettes<sup>35</sup> are taxed in most countries significantly higher than tobacco intended for smoking. The smallest difference we see the example of Sweden, then the biggest differences between the level of taxation of Marlboro cigarettes and cut tobacco, for example, in Belgium, Germany and Luxembourg.

#### Increasing cigarette prices and its impact on their future consumption

Nobel Prize-winning economist Gary Becker (1996) in his investigation dealt with, among other things, the impact of price increases on cigarettes cigarette market, hence tobacco products. The main starting point was the realization that due to the addictiveness of cigarettes affects their current consumption to future consumption. Thus, the lower price of cigarettes makes them more accessible and enhances normal / current consumption, and consequently, the future here. The idea being levied if higher cigarette excise taxes in order to reduce their consumption is directly contrary to the above principle.

#### Regulation and its possible impact on the price of tobacco products

Tobacco products are goods that are subject to a large amount of government regulation.

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<sup>35</sup> On this graph is compared taxation of cigarettes and tobacco brand Marlboro designated for smoking.

These regulations are levied on them with a view to minimizing the damaging effects that come with their consumption brings.

The result of some regulations may be situations where an essential means of competition between manufacturers, by extension brands of cigarettes, happens pricing. Greater price competition, leading to relatively low prices then in conflict with public health policy precisely because of the reduction in the price of cigarettes and tobacco products, they become more accessible to a wider range of consumers.

Increasing the number of regulations creates a space for the emergence and development of the black market. Regulation entails additional costs for manufacturers, which are logically reflected in the increase in prices of tobacco products, thereby smuggling and sale of untaxed cigarettes becomes profitable illegal business activities. It is therefore necessary to carefully consider all possible consequences of regulation and correctly estimate its economic and social impacts.

#### Adjusting excise tax on cigarettes

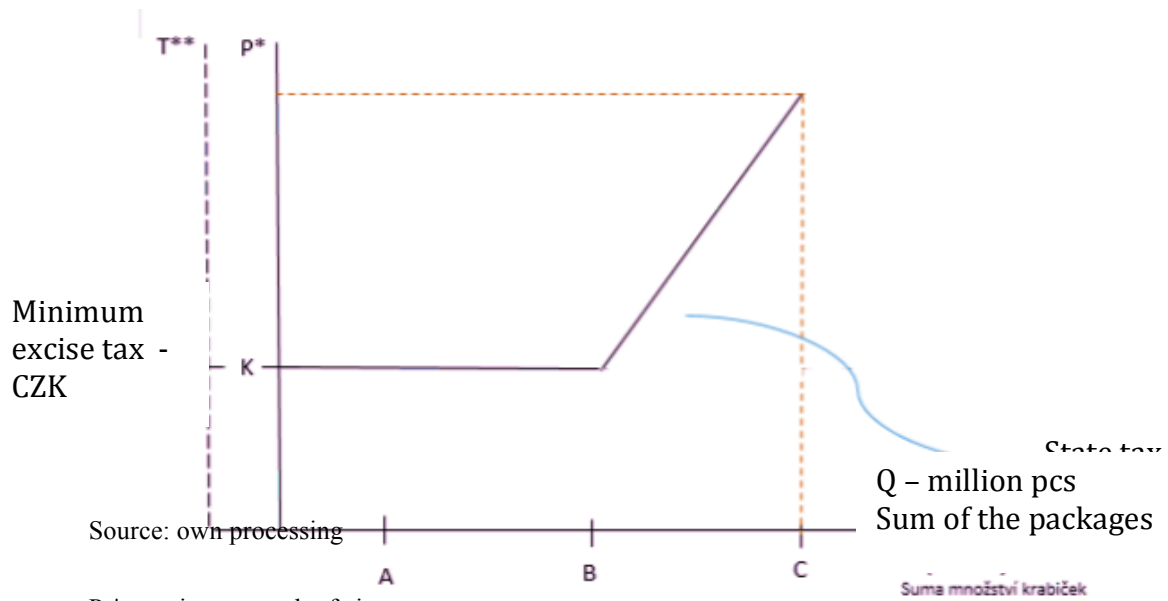
Excise duty on cigarettes in the Czech Republic and the percentage of the sum of the fixed components of the tax. The fixed component of the tax is calculated by multiplying the number of pieces in the package and the tax rate for the piece and then the percentage component as a percentage of the final price of cigarettes. The EU Member States have widely varying settings of these components excise tax, as shown in Chart no. 5.

The following two charts illustrate the cigarette market.

The first image - Option 1 - demonstrates the situation existing situation, ie well below the minimum excise duty "low-cost" than cigarettes "ad valorem" tax on more expensive cigarettes. On the vertical axis "P" measures the price of a pack of cigarettes. The vertical axis of the "T" is a measure of the amount of excise duty, which corresponds to the price of a pack of cigarettes P. Price package "K" on the axis P characterizes the package, which is burdened with a minimum excise tax. Packaging, that are more expensive than a package of K are then loaded higher than the minimum excise tax. In packages of cigarettes that are cheaper than a pack of K, the excise duty will calculate the minimum amount.

On the horizontal X axis is measured by the quantity sold cigarette packages. Points A, B and C are "representative" of individual price segments cigarettes. A represents a "low-cost" brand cigarettes, i.e. cheaper mark B represents the medium price segment, and C represents the most expensive brands of cigarettes. When multiplied by the number of packages of cigarettes with excise tax corresponding to the price, the area below the line curve shows the tax revenue of the state budget.

Graph no. 12: Option 1 - lower minimum excise duty

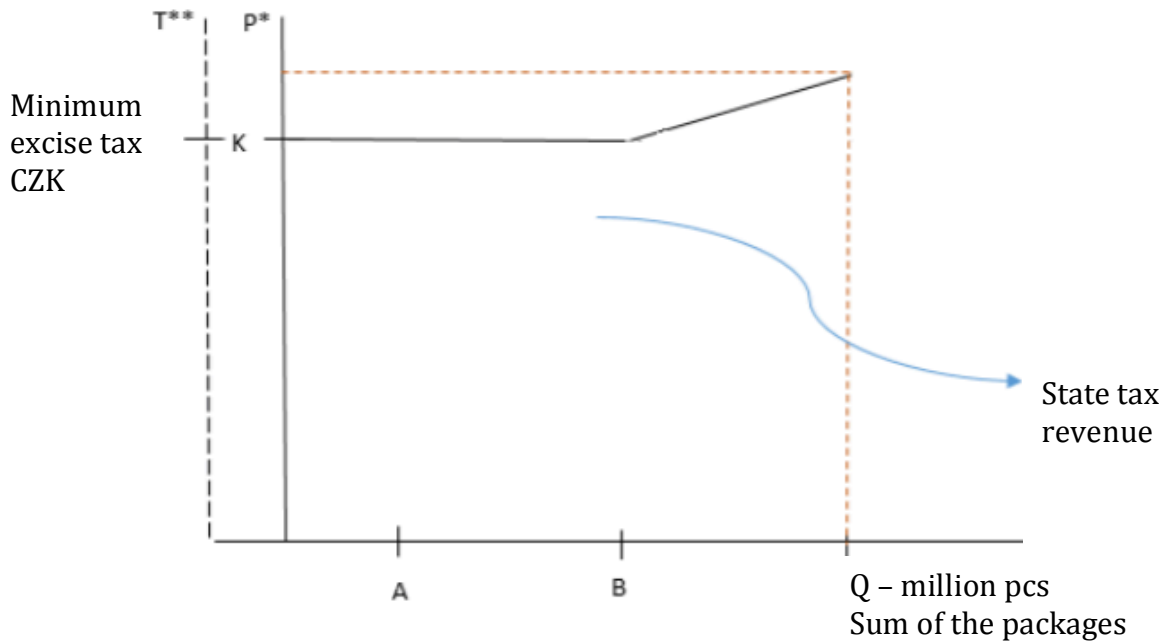


P \* ... price per pack of cigarettes

T \* ... excise duty corresponding to the price P



Graph no. 13: Option 2 - a higher minimum excise duty



Source: own processing

$P^*$  ... price per pack of cigarettes

$T^*$  ... excise duty corresponding to the price  $P$

The second figure shows a situation where the minimum excise duty on cigarettes increased. Already it is known that due to the changing preferences of consumers after the price increase cigarette consumption shifts more to the segment of "low-costových" cigarettes. The current method of increasing the excise tax distorts the market while leading to growth in sales of cheaper cigarettes, thus favoring their manufacturer. Yet it is the low price of a pack of cigarettes is frequently mentioned argument of politicians in combating smoking. Increasing the minimum tax rate could these market distortions minimize or completely eliminate.

## 12 Conclusion

The aim of my thesis was to elaborate a comprehensive analysis of the tobacco market, focusing on the taxation of these products, and the ensuing revenues for public budgets, consumption, and state regulation and their consequences, including the black market in tobacco products.

On the basis of the analysis of the market for tobacco products in the Czech Republic can be concluded that the phenomenon of smoking is still a current issue. On the market with tobacco products runs a number of changes that have an impact not only on the market for these products, but also on the whole economy.

Furthermore, this market is subject to Peltzman effect, both on the consumer side and on the side of manufacturers. Increasing the excise tax on tobacco products is in addition to the intended consequences as well as those with which regulators initially did not expect. Peltzman effect is as follows - on the part of manufacturers that originally unintended effect of frontloading of tobacco stamps, issued by a lower tax rate, while seeking the maximum extent to eliminate the negative price shock and to maintain its profit margins. Given that the process of frontloading of tobacco stamps generates significant risks for the state budget as well as for manufacturers themselves, we observe on the part of manufacturers of tobacco products, demand for regulation of frontloading in accordance with the demand of the regulator itself. State regulation caused in the end the demand for more state regulation.

On the consumer side is Peltzman effect in changing consumer behavior. Due to the frequent increase in excise tax, consumers began to switch to cheaper cigarettes in the price segment and for smoking cut tobacco. This substitution has an effect on the structure of the tobacco market as some brands on the market "middle segment" disappears and production is moving just to cheaper brands of cigarettes or tobacco intended for smoking. This confirms the hypothesis about the structure changes in the assortment of tobacco consumption. It cannot be said that there would be an overall decline in the consumption of these products<sup>36</sup>, but clearly changing the structure of consumption due to price increases

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<sup>36</sup> The number of smokers in the Czech Republic is approximately 1/3 of the population.

derived from increasing the excise tax on tobacco products.

This is related to the second hypothesis of maintaining the level of budget revenues through excise taxes on tobacco products, despite a drop in sales of cigarettes in the legal market, which is also confirmed. The analyzed data showed an interesting trend in the development of cigarette consumption in comparison with the development trend of budget revenues. They illustrate that despite a slight decline in cigarette consumption budget revenues from the excise tax on tobacco products continued to grow. The consumption of cigarettes has since 2008 a downward trend, while revenue from excise taxes on tobacco products are from the same year a growing trend. This effect confirms rational substitutions consumers, who in many cases by cigarette pass the tobacco intended for smoking, instead of eliminating tobacco consumption as such.

In another part of this work, which was devoted to regulations, it is clear that regulation reflected on tobacco products also bring unintended consequences (Peltzman effect). A number of these regulations also gives space for growth of the black market, as any further regulation brings costs for the manufacturer or distributor, which logically translates into higher prices. Pricing of tobacco products because of regulation becomes one of the principal means of competition. Companies effort to maximize market share through low prices lead to opposite consequences than the policy aims of public health. Relatively lower prices for tobacco products by increasing their access to a wider range of consumers.

State regulation of the frontloading of the stamps will not lead to the intended aim of reducing the "tax evasion", through diversion lower rates of excise duty (originally due to lower prices of tobacco stamps). This regulation will deepen market distortion and will reduce the competitiveness of the market. A better alternative would be to publish a long-term "plan" raising the excise duty so that producers can incorporate these expectations into their business strategies and on this basis to optimize their production.

My next recommendation would be to consider the introduction of a uniform tax rate on all types of tobacco products, incl. cut tobacco. Such a measure would reduce the tendency to substitute, and probably would have been more effective tool to reduce the number of consumers of tobacco products, which should be the primary goal of socially responsible government.

Based on the analysis of all the areas outlined in the introduction, it is possible to state that the market with tobacco products runs a number of changes. Subject to further examination could therefore be an analysis of adjustment or the composition of the excise tax - whether the change in the ratio of specific and ad valorem taxes had an effect on reducing the consumption of tobacco products and to increase public revenues.

Another area that raises research interest is the analysis of alternatives. It is not just the substitution of more expensive products for cheaper, which can be seen recently, but also, for example, substitution of electronic cigarettes. Due to the short period of their occurrence, there are not yet available applicable data at the relevant time series.

## REFERENCES

Adler, J., Freedman, A.: „Tobacco Suit Exposes Ways Cigarette Firms Keep the Profits Fat“. Wall Street Journal, 5. 3. 1990, s. 1.

Allen, E.: „The Illicit Trade in Tobacco Products and How to Tackle It“. International Tax and Investment Center. Edition II, 2013. Online dostupné zde: <http://www.iticnet.org/images/The%20Illicit%20Trade%20in%20Tobacco%20Products%20and%20How%20to%20Tackle%20It%20-%20Second%20Edition2.pdf> (13. 8. 2014).

Becker, G., Becker, G. N.: „The Economics of Life“. McGraw-Hill, USA, 1996. ISBN 0-07-005943-8.

Becker, G., Grossman, M., Murphy, K.: „An Empirical Analysis of Cigarette Addiction“. The American Economic Review, Vol. 84, No. 3. (Jun., 1994), pp. 396-418.

Becker, G., Murphy, K.: „A Theory of Rational Addiction“. Journal of Political Economy, vol. 96, no. 4, 1988, University of Chicago.

Becker, G.: „Teorie preferencí“. Grada Publishing a Liberální institut. Praha, 1997. 352 stran. ISBN 80-7169-463-0.

British American Tobacco. Who we are. Online dostupné zde: [http://www.bat.com/group/sites/UK\\_\\_9D9KCY.nsf/vwPagesWebLive/DO52ADCY?openDocument&SKN=1](http://www.bat.com/group/sites/UK__9D9KCY.nsf/vwPagesWebLive/DO52ADCY?openDocument&SKN=1) (13. 8. 2014).

Kubátová K., Vítek L., 1997. Daňová politika, teorie a praxe, Praha : nakladatelství Kodex Bohemia s.r.o.

ŠULC, I. Zákon o spotřebních daních s komentářem. 3. aktualizované vydání. [s.l.] : Anag, 2010.

Celní správa České republiky. Daně. Spotřební daně. Tabák. Předpisy Evropské unie upravující správu spotřební daně z tabákových výrobků. Online dostupné zde: [http://www.celnisprava.cz/cz/dane/spotrebni-dane/tabak/Stranky/predpisy\\_eu\\_tv.aspx](http://www.celnisprava.cz/cz/dane/spotrebni-dane/tabak/Stranky/predpisy_eu_tv.aspx) (3. 5. 2014).

Celní správa České republiky. Statistiky. Základní komentář ke statistikám. Online dostupné zde: <http://www.celnisprava.cz/cz/dane/statistiky/Stranky/komentary.aspx> (16. 8. 2014).

Celní správa České republiky. Statistiky. Výroční zprávy. Online dostupné zde: <http://www.celnisprava.cz/cz/statistiky/Stranky/vyrocnizpravy.aspx> (14. 5. 2014).

Celní správa České republiky. Statistiky. Výsledky celního a daňového řízení. Online dostupné zde: <http://www.celnisprava.cz/cz/statistiky/Stranky/vysledky-celniho-a-danoveho-rizeni.aspx> (2. 5. 2014).

Časopis Sběratel. „Historie tabákového průmyslu“. Sběratel, č. 2, 2009. Online dostupné

zde: <http://www.sberatel-ksk.cz/clanek-historie-tabakoveho-prumyslu-2009040006> (12. 8. 2014).

Česká informační agentura: „Počet kuřáků v České republice neklesá“ (18. 6. 2013). Online dostupné zde: <http://www.cianews.cz/cs/w37905-studie-pocet-kuraku-v-ceske-republice-neklesa-665294> (19. 8. 2014).

Froněk, M.: „Klasik teorie regulace v Praze“. Liberální institut, 15. 10. 2007. Online dostupné zde: <http://www.libinst.cz/clanky-a-komentare/2205-klasik-teorie-regulace-v-praze/> (26. 7. 2014).

KPMG. Project Star 2010 Results. April 16, 2013. Online dostupné zde: [http://www.pmi.com/eng/media\\_center/media\\_kit/documents/project\\_star\\_2012\\_final\\_report.pdf](http://www.pmi.com/eng/media_center/media_kit/documents/project_star_2012_final_report.pdf) (12. 8. 2014).

KPMG. Project Star 2010 Results. August 22, 2011. Online dostupné zde: [http://www.pmi.com/eng/tobacco\\_regulation/illicit\\_trade/documents/Project\\_Star\\_2010\\_Resu\\_lts.pdf](http://www.pmi.com/eng/tobacco_regulation/illicit_trade/documents/Project_Star_2010_Resu_lts.pdf) (31. 7. 2014).

Kubátová, K.: „Harmonizace daní v Evropské unii“. Daně, 1998, č. 7-8, str. 2-7.

Laffer, A.: „The Laffer Curve: Past, Present, and Future“ (June 1, 2004). The Heritage Foundation. Research. Reports. Online dostupné zde: <http://www.heritage.org/research/report/s/2004/06/the-laffer-curve-past-present-and-future> (18. 8. 2014).

Ministerstvo financí České republiky. Tiskové zprávy 2014. „MF předložilo návrh novely zákona o spotřebních daních“. Mgr. Marek Zeman, 10. 3. 2014. Online dostupné zde: <http://www.mfcr.cz/cs/aktualne/tiskove-zpravy/2014/mf-predlozilo-navrh-novely-zakona-o-spot-17255> (12. 8. 2014).

Ministerstvo financí České republiky. Veřejný sektor. Monitoring. Plnění státního rozpočtu. Informace a přehledy o plnění státního rozpočtu. Online dostupné zde: <http://www.mfcr.cz/cs/verejny-sektor/monitoring/plneni-statniho-rozpoctu> (11. 4. 2014).

Nakladatelství ekonomické a právní literatury Sagit. Sazby a výpočet daně z tabákových výrobků. Online dostupné zde: [http://www.sagit.cz/pages/lexikonheslatxt.asp?cd=74&typ=r&levelid=da\\_423.htm](http://www.sagit.cz/pages/lexikonheslatxt.asp?cd=74&typ=r&levelid=da_423.htm) (25. 4. 2014).

Nakladatelství ekonomické a právní literatury Sagit. Zákony. Sbírnka zákonů. Zákon č. 354/2003 Sb., kterým se mění některé zákony v souvislosti s přijetím zákona o spotřebních daních. Online dostupné zde: <http://www.sagit.cz/pages/uz.asp?cd=76&typ=r&refresh=yes&levelid=444346> (11. 5. 2014).

Nerudová, D.: „Harmonizace daňových systémů zemí Evropské unie“. 3. vydání. Praha: Wolters Kluwer ČR, 2011. 320 str. ISBN 978-80-7357-695-0.

Philip Morris International. PMI Czech Republic. „Za vůni tabáku“, 2012. Online dostupné

zde: [http://www.pmi.com/cs\\_cz/careers/documents/PM\\_brozura\\_CZ\\_28.pdf](http://www.pmi.com/cs_cz/careers/documents/PM_brozura_CZ_28.pdf) (12. 8. 2014).

Philip Morris International. PMI Czech Republic. About us. Online dostupné zde: [http://www.pmi.com/cs\\_cz/about\\_us/pages/about\\_us.aspx](http://www.pmi.com/cs_cz/about_us/pages/about_us.aspx) (13. 8. 2014).

Philip Morris International. PMI Czech Republic. Naše výrobky. Další tabákové výrobky. Online dostupné zde: [http://www.pmi.com/cs\\_cz/our\\_products/other\\_tobacco\\_products/pages/other\\_tobacco\\_products.aspx](http://www.pmi.com/cs_cz/our_products/other_tobacco_products/pages/other_tobacco_products.aspx) (14. 4. 2014).

Philip Morris International. PMI Czech Republic. Naše výrobky. O tabáku. Online dostupné zde: [http://www.pmi.com/cs\\_cz/our\\_products/pages/about\\_tobacco.aspx](http://www.pmi.com/cs_cz/our_products/pages/about_tobacco.aspx) (12. 8. 2014).

Server Lidových novin. „Jsme pod tlakem, přiznává Philip Morris. Lidé kouří řezaný tabák“ (25. 3. 2014). Online dostupné zde: [http://byznys.lidovky.cz/jsme-pod-tlakem-priznava-philip-morris-lide-kouri-rezany-tabak-p7t-/firmy-trhy.aspx?c=A140325\\_115626\\_firmy-trhy\\_mev](http://byznys.lidovky.cz/jsme-pod-tlakem-priznava-philip-morris-lide-kouri-rezany-tabak-p7t-/firmy-trhy.aspx?c=A140325_115626_firmy-trhy_mev) (7. 8. 2014).

Vyhláška č. 430/2003 Sb., ze dne 2. prosince 2003, která upravuje způsob stanovení ceny pro konečného spotřebitele u tabákových výrobků. Sbírka zákonů České republiky.

Vyhláška č. 467/2003 Sb. o používání tabákových nálepek při značení tabákových výrobků. Sbírka zákonů České republiky.

Vyhláška č. 467/2003 Sb. ze dne 12. prosince 2003 o používání tabákových nálepek při značení tabákových výrobků. Sbírka zákonů České republiky.

Zákon č. 110/1997 Sb., o potravinách a tabákových výrobcích a o změně a doplnění některých souvisejících zákonů. Sbírka zákonů České republiky.

Zákon č. 132/2003 Sb. kterým se mění zákon č. 40/1995 Sb., o regulaci reklamy a o změně a doplnění zákona č. 468/1991 Sb., o provozování rozhlasového a televizního vysílání, ve znění pozdějších předpisů. Sbírka zákonů České republiky.

Zákon č. 305/2009 Sb. ze dne 24. července 2009, kterým se mění zákon č. 379/2005 Sb., o opatřeních k ochraně před škodami působenými tabákovými výrobky, alkoholem a jinými návykovými látkami a o změně souvisejících zákonů, ve znění pozdějších předpisů. Sbírka zákonů České republiky.

Zákon č. 379/2005 Sb. o opatřeních k ochraně před škodami působenými tabákovými výrobky, alkoholem a jinými návykovými látkami a o změně souvisejících zákonů. Sbírka zákonů České republiky.

Zákon č. 235/2004 Sb. o dani z přidané hodnoty. Sbírka zákonů České republiky.

Zákon č. 353/2003 Sb., o spotřebních daních, ve znění pozdějších předpisů. Sbírka zákonů České republiky.